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NEWS IN BRIEF

The Commerce Department has notified the Fruitgrowers' Federation of N.S.W. that owing to lack of unanimity regarding the proposed Australian Citrus Advisory Council, legislation would not be introduced at this juncture.

A Government bounty of 3d. per lb. on Prune exports during 1935 was recently announced. The grant will total £8,400.

For 1936 the bounty will be 3d. per lb., amounting to £4,500.

The Canadian type Apple case is becoming increasingly popular in Tasmania.

The Research Committee of the South Australian Fruit Marketing Association, reports definitely beneficial results where sulphate of ammonia experiments had been carried out: they considered that the sulphate of ammonia did not leach out quickly and thus had a longer life than was generally supposed.

The Fruitgrowers' Federation of N.S.W. favors the formation of an Australian Citrus Advisory Council, but does not agree with the proposals for raising finance by means of a levy. The Federation has offered to do the secretarial work for a Federal citrus organisation.

At a recent conference between the V.C.C.A. and the Fruit Retailers' Association, the Thompson's Navel was condemned by retailers as unfit for sale and consumption. Retailers urgently requested the maintenance of maturity standards for citrus.

The report of the N.Z. Executive Commission on agriculture vindicates the integrity of the N.Z. Export Control Board, but does not favor a return to the single agency system in London. Other modifications of policy are recommended in the report.

Our N.Z. correspondent states there are persistent rumors that negotiations between the Dominion and the Australian Governments for the lifting of the citrus embargo, are well is anticipated. He mentions that Jamaica Oranges are gaining headway on N.Z. markets.

Mr. C. G. Savage, N.S.W. Dept. of Agriculture, recently expressed appreciation of the manner in which the Banana Growers' Federation was co-operating with the Department in eliminating the danger spots from which infection could spread.

The value of advertising was demonstrated in Melbourne during March, when the milk producers conducted a splendid educational advertising campaign. The consumption of milk was largely increased, to the benefit of all concerned.

Strawberries appeared on menus in the fashionable London hotels and restaurants at the end of March—at a price. They cost £1/5/- a lb., which worked out approximately 9d. each. The strawberries, which were grown in England, had been specially forced, and were of a remarkable size.

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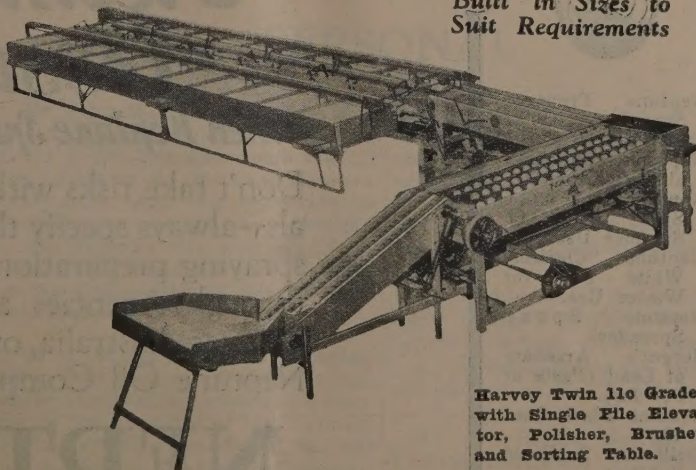
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The fruit packing classes conducted by the Tasmanian Dept. of Agriculture are greatly appreciated.

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Continued dry weather has reduced Tasmania's exportable Apple quantities.

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The N.Z. public is favorably impressed with Jamaican Grapefruit.

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A Vegetative Pear, which produces fruit without blossoms, has been discovered in Russia. Scions have been distributed to research stations.

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When the Victorian Minister for Lands visited the Farmers' Convention, at Mildura in March, he inspected vineyards and looked into drainage problems. Representatives of the Australian Dried Fruits Association urged that any projected increase of plantings be discontinued.

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The current issue of the National Bank Review contains some interesting information regarding the Apple industry. The good work of the Australian Apple and Pear Export Council is favorably commented on.

Obituary

Sudden Death of S. J. Perry.

It is with great regret we have to announce the death of Mr. Samuel J. Perry, of 364 Little Collins-street, Melbourne, at the age of 68 years, after a short illness.

The late Mr. Perry was one of the pioneers of the fruit export business, and it may be said that he was one of those far-seeing men who laid the foundations for this now extensive industry.

Probably in a special manner will Mr. Perry be always remembered — for his courage and vigour in establishing the Pear export business. He literally had to take his courage in both hands when launching what was at the time a hazardous business.

After pioneering the Pear export trade under what he was always proud to describe as "Somerset" conditions, the business passed many vicissitudes, as growers and exporters had not then the benefit of scientific research on this subject.

However, Mr. Perry retained his faith in the future of the Pear export trade, despite many setbacks, and finally completed arrangements with Goulburn Valley growers on long term contracts for export Pears to be assembled at the up-to-date packing house and cool stores at Shepparton.

The late Mr. Perry established a substantial business in the handling of Apples and many other commodities for export. The firm has large connections in the near East and other places. In addition, Mr. Perry was a director of several big business enterprises covering a wide range of activities, demanding much knowledge, energy and business acumen. He believed in the gospel of hard work.

In his personal relationships, Mr. Perry had a host of appreciated and appreciative friends. He was a kindly man, and, while firm and business-like in all his undertakings, he ever placed reliance on the character of those with whom he became associated.

He died in harness. His passing leaves a gap in the business world of this city and State. Those associated with him in the fruit export business recognised him as a champion of the industry: he fought many battles on its behalf. The late Mr. Perry leaves a widow, a daughter (Mrs. J. G. H. Sprigg) and two sons—Arthur and Noel, who, with a very large number of personal and business friends, mourn the passing of this virile and big-hearted Australian.

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Several hundred people attended the funeral. Four cars were needed to convey the many floral wreaths.

SIR JAMES COOPER DIES.

Australian Representative in London.

Representative of the Australian Canned Fruits Board, also of the Australian Dried Fruits Board in London, Sir James Cooper, was an outstanding figure in the marketing of Australian primary products in Great Britain. Known as an authority and personally acquainted with both official and private commercial leaders, he created for himself a dignity in marketing that was widely known.

Although he never visited Australia, Sir James had a wonderful knowledge of this country and its products and an enviable grasp of economic conditions throughout the world. He died in London on March 20 after a short illness. His service to Australia has been invaluable.



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Pears Grown Without Blossoms

Vegetative Pears Grown and Tested in Russia

FRUIT HAS NO SIGNS OF SEEDS NOR SEED CELLS.

"Fruit formed by leaves grown closely together as distinct from Pears and other fruits which follow blossom and fertilization."

[All connected with horticulture will observe with interest the following articles, translated from the Russian, describing a new feature of fruit culture—Pears formed from leaves, without blossom. One of the authorities quoted, J. V. Mitsurin, who recently died, achieved world fame as a horticulturist. Comments from readers are cordially invited.—Editor "Fruit World and Market Grower."]

IT WAS IN THE YEAR 1931 when the agriculturist of the Anapa district, Mr. Tscherni, found in that district the very first two Pear trees producing so-called false vegetative fruits, showing no difference to usual Pears, neither in taste nor in other directions.

At those times no further attention in all was paid to this discovery. Recently in the vicinity of the Black Sea port Tuapse, one fruitgrower and experimenter, Mr. T. K. Vassiltschenko, again found a similar Pear tree. He took the fruits off and sent them to the nearby Sotschi Agricultural Experiment Station at Sotschi (also seaport on the Black Sea border), where they attracted the full attention and greatest interest, and where they were examined and taken for re-breeding and propagation.

The Pear tree discovered by Mr. Vassiltschenko is an exceedingly rare species. Not long before his death, the late J. V. Mitschurin (Russia's celebrated and greatest fruitgrower and breeder) wrote, that a vegetative Pear should find world-wide interest.

The fruit of this Pear becomes formed by leaves which are grown together closely or compactly, contrary to usual Pears and any other fruits, which appear to be the result of blooming of trees and their fertilisation.

The practical side and importance of a vegetative Pear lies in the facts, that the Pear does not differ in taste with a regular Pear, and that it may be able to

create a revolution in the world of plants.

If one takes into consideration the conditions of weather at the time of flourishing in the Black Sea district as well as in a great number of other districts which include rain, fogs, winds, frost which are absolutely unfavorable to flourishing, he will readily realise the exceptional high importance of breeding such plants (trees) which are producing their fruits by leaves only, without any blooming.

Otto Sokoloffski,
Rostoffon Don, U.S.S.R.,
Moscow Street No. 9.

:: :: ::

Translated from the Russian newspaper "Molot" of August 22, 1935.

EXTRACT FROM EXPERIMENTAL
STATION, SOTSCHI, RUSSIA,
OCTOBER 7, 1935.

THE FIRST DESCRIPTION of a Pear grown by false vegetative production, was delivered by the agriculturist, Mr. Tscherni in 1931 and published in the North Caucasian Journal "Kolchosni ssad voga rod," meaning "Orchard and

Vegetable Garden of a Collective Farm." Further descriptions of Pears of vegetative formation were given by the late J. V. Mitschurin (vide his book, "The Summary of 60 Years' Work," and by F. M. Zorin, and published in Tome IX. of proceedings of the Experimental Station of Sotschi. However, the whole work of all three authors did not explain extensively and clearly enough the exceptionally original formation of the fruit.

This year, in a garden of the Children's Commission at Tuapse, was discovered a Pear tree of an unknown sort which showed very distinctly all stages of a false formation of the fruits, thus offering us a proper opportunity to study fully its entire process.

The fruits of this individual tree become formed by reproductive organs and by vegetative formation.

The fruits of normal formation are ripening towards the end of June, and being of soft flesh, are sweet with a light shade of acid.

False vegetative fruits are developed by growing of leaves of cuttings, grafts or scions, of leaves themselves, the ends of which, being joined on the top, produce a false impression of a cell. A characteristic feature of a vegetative fruit is a band, creating the impression of growing a fruit from another fruit; the area of the band being covered with shortened leaves.

Neither signs of seeds, nor of seed cells even of a rudimentary character, were found after the Pears had been cut. Size of vegetative fruits: 6, 5 cm. high, 4, 5 cm. in diameter; no difference in taste between Pear of normal (or regular) production and the vegetative ones.

Description of this Pear with photo. and original drawings attached, we sent to the editors of the journal of the Academy of Sciences, "Soviet Botany." At present we are observing the mother tree, having made quite a number of grafts with buds and cuttings (scions) to Quince tree, forest or wild Pear and to the crown of cultivated sorts. We intend to perform artificial pollination of European sorts of Pears with dust of blossoms of the Pear in question during the spring or 1936.

Besides that, we are making analytic researches of the vegetative fruits.

A more extensive report of the vegetative Pear we shall publish towards the end of 1936.

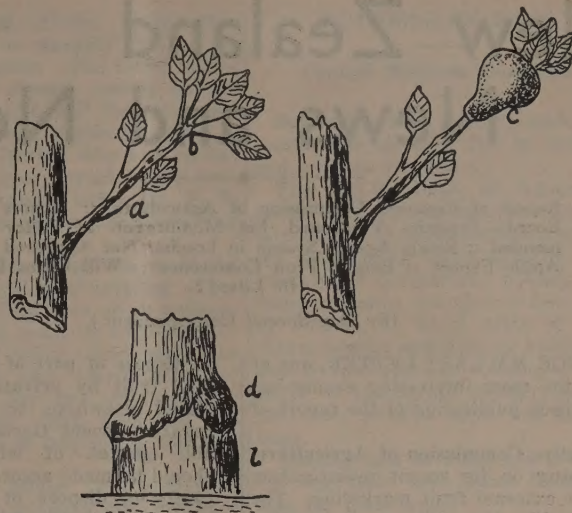
We sincerely request you to be kind enough upon reading the literature mentioned below, to let us have your opinion about this phenomenon, stating also whether you have had or not similar cases of fruit formations under your conditions in your practice.

The whole quantity of grafts (scions) of the Pear in question is exhausted; therefore, we have no possibility of sending same prior to the autumn of 1936.

Literature re vegetative Pears—

V. Tscherni—"Let Us Correct the Faults of the Nature," "Kolchosni ssad i ogorod." No. 3 of 1932.

V. Tscherni—"Preservation of the Vegetative Pear is Absolutely Necessary," "Kolchosni ssad i ogorod." No. 1, 1933.



VEGETATIVE PEAR.

- (a) A yearly shoot or sprout or sprig.
- (b) End of a yearly shoot, sprout or sprig with a group of leaves, the lower part of which produces the vegetative fruit of a Pear.
- (c) Vegetative fruit with rosette of the rest of leaves on the upper funnel.
- (d) Lower part of the trunk or timber or tree to which a scion or graft was applied.
- (l) Excrescence over d.

J. V. Mitschurin—"The Vegetative Pear"—"The Summary of 60 Years' Work."

F. M. Zorin—Tome IX of the Proceedings of the Sotschi Station, Pomiculture at the Caucasians tremo of the Black Sea; part, Stock of Thoroughbred and Other Sorts."

F. M. Zorin—About Buds of Pears Curiously Grown and Similar to Fruits. "Soviet Botany," December, 1935, published by the States Botanic Garden of the Academy of Sciences.

With kindest greetings — (Signed) for the Director, Goodzenko, Senior Graduated Collaborators, Zorin.

:: :: ::

Commenting on the foregoing, Mr. F. M. Read, M.Ag.Sc., Chief Inspector of Horticulture, Department of Agriculture, Victoria, states that the edible part of the fruit from a Pear tree is really an extension of the growth of the stem at the base of the flower, and that in this respect Pears differ from other fruits such as Peaches and Plums. Development of vegetative Pears, as described in the Russian article herewith is of considerable botanical interest. Mr. Read further states that of the pome fruits, Pears have the peculiar characteristic of being capable of producing growth from the flower parts after the formation of flowers, and on this extension second blossoming often gave rise to fruit not dissimilar in appearance

from the fruit described in the article. It was generally seedless.

It is noted in the article herewith that the vegetative Pears described have no seeds nor seed cells. Very many of the normally produced Pears, however, are without seeds, although the seed cell formation is there.

Mr. Read further states that while the foregoing is of extreme botanical interest (and he is referring to authorities for further information), it would not appear, on present information, to be of substantial commercial value, by reason of the fact that specific varieties of Pears are grown for particular purposes — canning, local, interstate and export markets, cool storage, etc. There is no general purpose Pear, as varieties that do well in some districts do not necessarily come to their best in other districts.

It would be of interest to obtain scions from the Russian Research Station referred to. In this connection, Mr. Read states that the Department of Agriculture is in close and appreciative touch with the Russian agricultural research stations, as the ability of the Russian agricultural and horticultural research scientists is well known and appreciated. In fact, the department has received from the Russians many seeds and scions of plants, including Apricots and Peaches, etc., in order to determine their value as stocks, and has in return sent material of this nature to Russia by request.

PERSONAL

Mr. Peter Malloch, of Irymple, Vic., one of the leaders in the Australian Dried Fruits Industry, made a great impression on the Victorian Farmers' Convention, when that representative gathering met at Mildura in March.

Mr. Malloch's able summary of the dried fruits situation and its value to the Commonwealth was a valued contribution.

Mr. J. W. Barker (Messrs. Barker, Green and Parke), of Collins-street, Melbourne, fruit exporter, and a member of the executive of the Victorian Fruit Marketing Association, has left for London to observe fruit marketing conditions during the present Australian Apple and Pear export season. Mr. Barker is travelling to London via America.

Mr. E. Ray, of Kelso, near Bathurst, N.S.W., a capable and experienced grower, has been appointed by the

Fruitgrowers' Federation of N.S.W. to visit Melbourne and Hobart this season to examine Apple and Pear export inspection methods. The question of uniform methods of administration of the Commonwealth grading regulations is under consideration.

Mr. Archie Booth, the popular secretary of the W.A. Fruitgrowers' Association, is back at duty again.

All in the industry are pleased at the recovery of Mr. Booth's health.

Mr. W. Harris, Assistant Fruit Packing Instructor, Victorian Dept. of Agriculture, had to cease his appreciated instruction classes during March owing to illness.

Mr. Harris is warmly appreciated in fruitgrowing districts for his ability, energy and unfailing courtesy. He expected to resume duty early in April.

New Zealand News and Notes

Report of Executive Commission of Agriculture :: Export Control Board's Integrity Vindicated, but Modification of Policy Recommended :: Single Agency System in London Not Approved :: 1936 Apple Export :: Empire Fruit Conference :: Will Citrus Embargo Be Lifted?

(By Our Special Correspondent.)

SINCE MY LAST LETTER, one of the most interesting events has been publication of the report of the Executive Commission of Agriculture, following on its recent investigation of our external fruit marketing. The report, like the evidence, is lengthy, and covers in detail most of the matters discussed at the enquiry. For this very reason it is difficult to summarise the report in that the taking of extracts from the context is liable to give a wrong impression.

Generally speaking, the published comments indicate a vindication of the Fruit Board's policy integrity and efficiency, both past and present, but with this the writer is not inclined to agree in toto.

Whatever criticism there has been of the Board and its policy, there never has been, nor is there now, any suggestion from responsible quarters that the integrity of individual members was in question.

The policy of the Board most certainly has been questioned, and it is on record in the report of the Commission that certain features which have been prominent in past marketing policies should be definitely modified, and in some cases discontinued.

It therefore comes as a surprise that leader-writers, the "Orchardist of N.Z." in particular, should claim the report as a complete vindication of the Board's actions. It rather shows the report has been scanned and not studied, as it should be — complete disregard of those sections offering suggestions whereby future policy may be more in harmony with the general wishes of exporters.

The foundation cause of that enquiry was the sole agency system of 1933, whereby the whole of our United Kingdom export fruit was placed in the hands of one firm for disposal. On this particular point the report states—

"The Commission, however, does not recommend a return to the single agency system in London, believing that it is desirable to have a panel of Covent Garden brokers

to dispose of part of the New Zealand fruit by private treaty. As stated elsewhere, the Commission regards Covent Garden as a valuable market, of which full use should be made according to its capacity to dispose of our fruit on competitive terms with the Spitalfields Auction Mart. It is of the opinion, too, that a concession made by a broker or a combination of brokers, should not weigh against the advantages of a wider system of distribution in London."

Now that is a very sound opinion, and there can be few who will not agree. The Commission did think, however, that the retention of the single agency principle

in the provincial areas

was sound, provided the best agent was appointed in any particular market.

The underlying idea of this observation was the keeping of effective control in the hands of the London manager of the Fruit Board. At the same time the Commission "recommends that the Board should not, as a long-term policy, adhere too closely to the single agency system in the case of every provincial market, but that it should hold itself free to substitute another broker in any centre if it appeared that better results would be achieved by the change."

Pooling has been an intermittent feature of our marketing system over a number of years and is, for this season at least, to be continued.

The Commission offers suggestions that effective means be adopted to safeguard the pools against faulty packing.

A suggestion to this end is the withdrawal from pools of packs that come under this heading, but while it may be easy to recommend such steps it usually is much more difficult to effectively carry them out. To do such a job properly and with justice, quite an army of inspectors would be required and with the producer footing the bill the question soon would arise—are the advantages worth the cost?

Nomination of brokers is not recommended, though this will not cause any heart-burning provided the panel of London brokers embraces all those firms that have for years rendered valuable service to the N.Z. fruit-growers. Two prominent brokers who have not been able to see eye to eye with the Fruit Board are again to be offered to share in the London distribution, and all hope they will accept. While the enquiry may seem to some to have settled the questions in dispute, to others it seems to little more than throw light on many obscure points. Possibly no more will be heard of it until the present export season is over.

1936 Export.

With little improvement in weather conditions the export season is proceeding apace. On the quantities shipped to date one would say that the season is backward or the unfavorable weather has retarded export work—more than likely the latter, for we certainly have not experienced a dry summer. All of our fruit-growing districts have more or less suffered from the elements this season, the latest being Otago, where heavy wind took toll on Saturday, the 14th.

The first of our principal varieties, C.O.P., has proved very disappointing. The early estimates counted on an export of approximately 100,000 boxes, but it now seems 70,000 will be the sum total of this variety. The packing of Jonathan is well under way, but it is too early yet to determine how near to estimates the crop will be. How often the appearance of fruit on trees is misleading when it comes to packing out. Where pepper spot is present—and it is evident this year—it is astonishing how the rejects pile up—it takes the grading table to tell the tale.

The published shipping allotments to date indicate our fruit will appear on all the usual markets, with the possible exception of the Eastern seaboard of America and the Argentine. In 1935 the former market was decidedly unremunerative, and is not to be wondered at that a repetition is not contemplated.

The position in the Argentine some years ago was good, and up to 150,000 boxes were absorbed at quite payable prices. Brazil continues to take reasonable quantities and so too does Canada. Certain shipments have been allocated to the Continent, but it is understood the actual destination will be dependent on selling the complete loading, with money up, prior to the arrival of the carrying vessel.

West Coast loadings show a fair proportion of the total to the United Kingdom though possibly less than on

occasion in past seasons. It would seem the Fruit Board is anticipating fairly strong American competition in these markets throughout the arrival of our early and mid-season varieties and have arranged loadings accordingly.

Empire Fruit Conference.

I made mention in my last letter that it was felt New Zealand should have additional representation to that of the London manager (Mr. H. Turner), and I now hear of an unofficial report that one of the Government Nominees on the Fruit Board (Mr. R. Paynter) is going to represent New Zealand at that important conference. To date neither confirmation of the report nor Government approval of the appointment has appeared. The appointment of Mr. Paynter raises an interesting point in that a Government Nominee must be in attendance at all Fruit Board meetings. Mr. Paynter would be absent from New Zealand for quite a few months, so it would seem necessary that a temporary appointment at least, will require to be made for the term of Mr. Paynter's absence. Fruitgrowers are interestedly watching the position for such an appointment would be the first of its kind undertaken by our new Labor Government.

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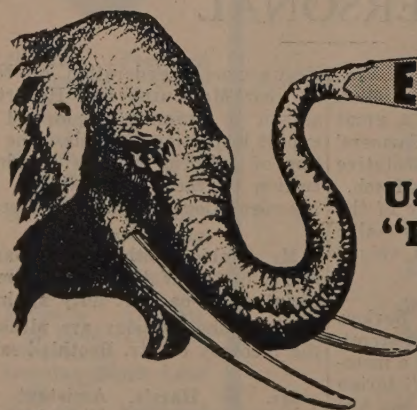
Nothing to report on this score, other than to advise that the first session of our new Parliament opens on Wednesday, the 25th, and we are promised information then, though the system as applied to the dairy industry will not operate until the beginning of the new season in August next. It does not follow that the same principle will apply to the fruit industry, but one never can tell.

Citrus Embargo.

Persistent rumors are current that negotiations between the Australian and New Zealand Governments are well ahead, and that a mutually satisfactory settlement to both countries will soon be an established fact.

In the meantime Jamaica has made good headway—the quality, while possibly not up to the standard of some of the Australian packs, is quite good, and Grapefruit particularly has come in for very favorable comment.

Through the absence of other than limited supplies of South Australian Oranges, which have been selling at comparatively high prices, Australia has quite a deal of ground to recover. It hardly seems right, but fruit-eating seems to be a habit that requires cultivating, and therefore easily lost. The general public is more or less apathetic, merely accepting what is offered, and to-day it is Jamacian (Continued on page 7.)



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Extract "BETTER FRUIT," U.S.A., February, 1934: "Idaho Spray Programme for Codlin Moth Control, 1934," by Dr. Claude Wakeland, Department of Entomology, University of Idaho. Experiments in the State for the past six years have shown that LEAD ARSENATE is the best, as well as the most economical insecticide that we have tested for Codlin Moth control. Entomologists are agreed that there is no substitute for Lead Arsenate that can be recommended to the public.

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Silver Leaf

A FUNGUS DISEASE AFFECTING PLUM, APPLE AND CHERRY TREES :: CONTROL METHODS DESCRIBED.

(E. Leishman, District Horticultural Instructor, South Australian Department of Agriculture.)

THE "SILVERING" of the leaves of Plum, Apple, and Cherry trees has been observed in Hills districts for a number of years, and although frequent examinations of diseased trees were made, it was not until 1931 that I was able to obtain fructifications of a bracket fungus from trees so affected. This fungus was obtained from portions of Apple and Plum trees carrying silvered leaves in orchards situated at Carey's Gully, Bridgewater, and Lenswood, and identified by Mr. S. D. Garrett, late Assistant Plant Pathologist of the Waite Agricultural Research Institute, as *Stereum purpureum*. Since this definite identification of *Stereum purpureum* as the cause of silvering, the disease has become widespread on Plum, and, to a lesser extent, Apple and Cherry trees, throughout the State.

Symptoms.

Usually, in the beginning, the disease is confined to a single branch or twig, causing the leaves to assume a silvery hue approaching the color of lead. The branch showing this effect generally dies, and from year to year other branches are affected, until the whole tree is involved. Probably three to six years elapse before the tree is wholly killed. The silvering of

the leaves is claimed to be due to the secretions of toxins by the fungus in the stem. On the dead limbs and trees the fruiting bodies of this fungus appear. The fructifications appear in two forms, either as flattened incrustations up to several inches in length or forming bracket-shaped projections from about 1/4 inch to 1 inch in width, arranged in tiers one above the other on the dead bark. This bracket fungus may be distinguished by the fact that the inner spore bearing surface of hymenium is always quite smooth, of a lilac to purple color. Where leaf silvering due to this fungus occurs, a brownish discoloration of the wood towards the base of the branch is always found.

Control.

Stereum purpureum is a wound parasite, and can cause infection only through wounds due to pruning, bruising the bark of limbs, and breaking off of branches. Trees affected with this fungus do not always die; young and vigorous trees may occlude the fungus by the formation of an impenetrable gum barrier around the invaded tissues.

Resistant varieties are those in which this gum barrier is most readily formed. During the summer months (June, July and August) in England

all varieties of Plums exhibit this gum reaction so strongly that no infection can occur. The usual measures of fruit disease control do not apply to "Silver Leaf," therefore precautionary means should be taken.

Mr. S. D. Garrett, who had an opportunity to observe work in this connection in England under Dr. F. T. Brooks, recommends the following control:—

1. All wounds should be protected as soon as possible by covering either with soft grafting wax or an antiseptic thick paint, made up as follows:—To 2 lbs. of white lead paste (as bought) add two teaspoonsful of paste dryers, and two tablespoonsful of linseed oil. Mix, then add two tablespoonsful of turpentine, and mix well.

2. By the Silver Leaf Order of 1923, English growers are compelled to

destroy before mid-summer

all dead, woody tissues capable of harboring the fungus, meaning not only dead branches actually on the trees, but all dead wood lying about the orchard.

By cutting out dead branches shortly before mid-summer the risk of reinfection through wounds thereby made is reduced to a minimum, for the spores of the fungus are then least abundant. It is exceedingly difficult for the fungus to cause infection at that season.

3. In the early stages, when the silvering is confined to a few branches, the disease may be controlled by cutting these out early in the summer. Care must be exercised to cut back well beyond the limit of the discolored wood, otherwise the operation will have been useless. There is, however, a chance that with young and vigorous trees silvered branches may recover. The chances of natural recovery may be materially increased by careful manuring.

The importance of painting wounds with an antiseptic paint after pruning operations has always been advocated as a precautionary measure against fungus diseases. Definite proof that the Silver Leaf disease is in the district should stress the importance of the operations, such as destroying dead limbs, more especially in orchards where Silver Leaf has appeared.

In order to limit the further spread of this serious disease, regulations are in preparation whereby orchardists will be obliged to remove and destroy by burning limbs or trees which have died as a result of the disease.—"Sth. Aust. Journal of Agriculture."

RUTHERGLEN BUGS.

Control Methods Described.

Rutherglen bugs recently made their unwelcome presence felt in orchards and market gardens.

The N.S.W. Dept. of Agriculture states that control measures necessitate the use of contact dusts or sprays, the dusts being more effective. A mixture of pyrethrum powder and flour, or kaolin, one part to four parts by volume, or equal parts of pyrethrum powder and flour, or kaolin, one part to four parts by volume, or equal parts of pyrethrum powder, and 2 1/2 per cent. nicotine dust, will kill the bugs.

Dusting can be employed not only for vegetable and other crops, but also for fruit trees.

The use of smoke screens from burning heaps of semi-dry weeds along the windward side of the crop or orchard is effective in driving the bugs out.

To prevent the bugs migrating from weeds and herbage in which they may be abundant, the infested areas should be sprayed with strong oil and soap emulsions (crude oil or kerosene one part to eight or ten parts of water) or with crude creosote. Other methods are to dust with calcium cyanide or burn over the infested grass and weeds.

A deep furrow

may also be used to prevent the bugs from crawling into cultivation paddocks; or a narrow band of crude creosote oil or wood-preserving oil, or thin tar, may be run along the ground to arrest and turn any advancing bugs away from the crops. Later, however, the winged forms become so numerous and such active fliers that it is impossible to prevent them entering crops and orchards, except perhaps by a smoke screen.

PEST CONTROL BY PARASITES.

Tomato White Fly Conquered by Parasite.

The destructive white fly of Tomatoes has been conquered in England by a chalcid wasp parasite. Scientists at the Cheshunt Research Station now breed the wasp in vast numbers for introduction into British glass-houses.

NEW ZEALAND NEWS & NOTES.

(Continued from page 6.)

mainly, and not Australian Oranges that are being offered.

Quite recently we have been promised a full parliamentary enquiry into the Islands fruit trade, an open invitation having been extended to anyone interested to come forward and state their case. As the Prime Minister (Mr. M. Savage) says, the fruit we need is there so why not have it? No doubt the situation as relating to Bananas and Oranges will be thoroughly gone into and this should give those interested a much needed opportunity to raise the question of Australian Oranges.

That Australia will not be overlooked is evidenced by Mr. Savage

stating: "For that matter, Australia isn't very far away either—they too have fruit we want and can't get."

N.Z. Grown Oranges.

It must of course be realised that the growing of Oranges in New Zealand has made rapid strides in recent years, and this seems to call for consideration of our own growers before extending the bounteous hand to the citrus growers of other lands. Mr. Savage has not overlooked this phase, for he stated, "and then there's our own country—we can grow plenty of fruit, but the growers have not been encouraged—it will be our job to see that they are."

Soon then, we should see developments and an extension of fruit trade activities between New Zealand and the Commonwealth.

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"SPRAYING DON'TS"

The following "Spraying Don'ts" issued by the publicity department of Wm. Cooper & Nephews Ltd., should be of interest to all orchardists.

Don't fail to apply the initial sprays every season for diseases which are prevalent in your locality. It is impossible to determine in advance whether or not the tree will be attacked.

Don't wait till the fungi have attacked plant or tree; fungicides are merely preventives and should be used at the correct season. After the disease has developed may be too late to save the plant.

Don't spray during or just after a shower, or when there has been a heavy dew. Much of the solution may be washed off or collect in spots. Wait till the leaves are fairly dry, when the spray is more effective.

Don't spray when the sun is very hot or you may scald the foliage.

Don't spray on top of the leaves only; spray the under sides where the pests hide, and be particular to keep your liquid thoroughly agitated.

Don't give up spraying because you think you do not see any benefit from your work. Perhaps you did not spray at the right period to prevent the damage; perhaps you did not use the right formula, or were not careful in its preparation; perhaps you did not spray thoroughly or often enough. Try again.

Don't spray only the trees from which you expect to get marketable fruit. Spray all the trees, otherwise the trees you go to the trouble to spray early in the season may become infected later by the unsprayed trees. "An ounce of prevention is worth a pound of cure."

Don't condemn spraying it, after observing the foregoing suggestions,

the results are still disappointing. It has been found that climatic conditions sometimes have a distinct influence either on the spray or on the foliage. This has been specially noticeable in the cases of arsenical mixtures, of Bordeaux mixture, and of lime-sulphur. Orchardists should therefore, in some measure, conduct their own experiments, carefully noting the effects before treating the whole area.

Don't keep such information to yourself. Let your neighbors and the Department know the results, and thus contribute to the advancement of the industry as a whole.

BRITISH INDUSTRIES FAIR.

Canned Fruit Popular.

A report from London stated that the recent British Industries Fair in Birmingham did record business in Australian canned and dried fruits. Australia is said to have done three times as much business as in 1935; 6,722 public customers bought Australian goods in some form, and over 200 enquiries were made by business firms. Over 75 per cent. of the 1936 estimated quota of Australian canned fruits is already booked up.

VICTORIA.

Pakenham Show.

Excellent fruit was on view at the annual show of the Pakenham and District Horticultural Show, on March 28. Particulars next issue.

Codlin Moth Parasite.

Discovery in South Australia.

For some time past, growers in the Barossa district of South Australia have had under observation a wasp, which is a parasite of the codlin moth grub. Some parasitic pupa were discovered which devoured the codlin grubs, then spun a fine web and went into the chrysalis stage. They emerged as tiny wasps (about the eighth of an inch long): the life cycle is very short, and it would appear that the parasites are a potential continuous enemy of the codlin grub.

Specimens have been sent to Dr. Davidson at the Waite Research Institute, and further information will be awaited with interest.

APPLE AND PEAR COUNCIL.

Will be Consulted by Federal Government on Problems Affecting the Industry.

Recently the Tasmanian State Fruit Board wrote to the Prime Minister regretting that the Australian Agricultural Council had apparently been consulted and had given advice differing from the decisions of the Australian Apple and Pear Export Council. This had particular reference to the Federal grant of \$100,000 for the Apple and Pear industry.

The Prime Minister has replied to the Board stating that the Commonwealth Government had no intention of disregarding the Australian Apple and Pear Export Council in the consideration of any problems relating to the industry. The Agricultural Council, continued Mr. Lyons, was a body comprising the Minister for Commerce, the Minister in charge of development, and the State Ministers concerned in all matters relating to agriculture where, however, purely department problems were being discussed by the council it did not appear necessary to consult the Apple and Pear Council, but should any matter arise upon which expert advice from the industry was needed, reference would be made immediately to the Apple and Pear Council.

ADVERTISING AUSTRALIAN FRUIT.

Books Packed in Cases.

As part of the South Australian Centenary publicity scheme, every case of export fruit leaving Adelaide will contain a copy of "Australian Scenic Tours" and a financial supplement of "The Advertiser."

This is a particularly handsome booklet, costing 1/- to buy in the ordinary way, and freely illustrated with the best obtainable pictures of Australian scenery. The greater part of it is devoted to South Australia, but views of the Grampians in Victoria, the Blue Mountains in New South Wales, and the Toowoomba district in Queensland are also included.

By this means Australian fruit will be well advertised in Great Britain as well as Australia as a tourist resort, whilst the financial news contained will draw attention to this side of Australia's business.

To Citrus Growers.

Orchard hand, four years' experience, all stone and export fruits. N.Z. wants experience handling citrus fruits, any State in Australia. — J. F. Dennison, Government Research Orchard, Private Bag, Nelson, New Zealand.

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Citrus News and Notes

Budding Citrus Trees

METHODS DESCRIBED

(By J. L. Provan, B.Ag.Sc., Horticultural Research Officer—Reprinted by courtesy from the "Vic. Journal of Agriculture.")

ON the subject of budding, there are perhaps more theories and ideas expressed, than on any other single operation in the citrus grove. While some of these ideas are relatively unimportant, and largely a matter of individual preference, others are technically unsound and should not be considered.

There should be no guesswork about budding, and if suitable conditions are observed, failures will be few.

The suggestions in this article are offered to the grower who requires to bud a few trees in his grove, and not to the experienced propagator who has already attained proficiency in the practice. As well as describing the method adopted in budding, a few of the common causes for buds failing will be suggested.

In recent years there has been a growing interest in re-working old and unprofitable trees to more profitable varieties, and a very earnest endeavor on the part of the citrus grower to improve the quality of his production by the careful selection of buds from the best trees.

The trees which will be ready for budding in the autumn were beheaded severely last spring.

This means that about three-quarters of the top was removed as far back as the main branching system. The result of such severe pruning forced into growth many latent buds, and these have grown during spring and summer, and produced strong vertical growths in which it is proposed to insert buds. This growth is called the stock.

Three things are required for the budding operation; suitable bud-wood, a sharp knife and material for binding.

Time of Budding.

Budding of citrus can be successfully accomplished only when the sap in the buds and the stock is moving freely. It is useless to attempt budding when the trees are not in this condition. Usually the best months for budding are November and March. The presence of six to seven inches of new growth on the tree, and the fact that the bark easily separates from the wood, serve as good indications of the free movement of the sap and the presence of new growth in the cambial region. When budding, choose a clear, warm day, and avoid excessively hot and windy weather. The spring buds (November) will commence growing in early December, but budding done in the autumn remains dormant during the winter, and commences growth the following spring. Personally, I prefer autumn budding, which has the additional advantage that failures can be re-budded in the spring without loss of time.

Choosing the Buds.

The choice of buds is the next and very important consideration. Trees which are to supply buds should be healthy, vigorous, and consistently produce heavy crops of good quality fruit of the desired variety. Any

trees which show signs of pronounced variation in quality of the fruit or any indications of "sporting," should not be chosen as parent trees. Having decided upon the particular trees, the next step is to select suitable bud-wood from shoots on these trees. The bud itself could be cut singly from the tree, but it is more convenient to remove the whole twig with a number of buds. Budwood should be chosen from well rounded, mature wood about the thickness of a pencil and not more than one year old. Young and immature wood of Orange and Lemon trees is angular and of a light-green color, but as maturity is approaching, it becomes rounded and dark-green. When nearly mature, the bark becomes somewhat rough and streaked with irregular grey patches, and finally turns a greyish-brown. When the wood has attained the dark-green color and has become well rounded, it is suitable for the supply of buds. I cannot advise growers with a limited experience of budding to attempt the use of angular wood. A good plan is to take into consideration the relative sizes of the bud and stock; budding a large vigorous shoot with a large bud from a thicker piece of bud-wood. When the bud-wood is taken from the tree it is usually cut into suitable lengths for handling—eight to ten inches long, and the leaves are removed by cutting through the middle of the petiole or leaf stalk. A short piece of stalk then remains attached to near the bud, this being very helpful in its subsequent handling.

If the bud-wood is not required immediately, or if it has to be transported any distance, it should be packed in damp sphagnum moss or damp newspaper and placed in a cool spot. It is a good plan to wrap the bud-wood in a wet sack during budding operations. All care should be taken to avoid any drying which will lessen the vitality of the buds.

Fundamental Principles of Budding.

Let us digress for a moment and in a few words explain why it is possible to cut a bud from one tree and place it in another, so that it unites and grows.

Between the bark and the wood of fruit trees is a thin layer of brick-shaped cells which are capable of growing and increasing in number by division. This layer is called the cambium. It is only because of these young growing cells that the budding operation becomes possible.

When the tree is growing freely, or in other words, when the sap is rising, the bark separates readily from the wood. This separation is possible because the zone of active growth in the cambial region is a weak area; the cells not having had time to become thickened and strengthened. When the bud is separated from the wood, portion of this cambial layer remains attached to the wood, and portion to the bud and shield of bark.

The object in budding is to place the young growing cells on the inside surface of the bark of the bud

against similar cells on the wood of the shoot to be budded, i.e., the stock. Then excluding as much air as possible to prevent excessive drying, conditions are favorable for a union to take place, and the bud is joined to the wood by a new growth of these cambial cells.

The Budding Operation.

The Stock: A good plan is to remove any leaves and thorns near the base of the shoot, so that they will not interfere with the operation. Then choose the side of the shoot which is nicely rounded and is sheltered from the hot afternoon sun, and near the base make an incision with the point of the budding knife in the bark, slightly more than an inch long and deep enough to cut the bark. The knife is then turned at right angles to this cut, and another cut is made across the bottom of this incision. The shape of the cut now resembles an inverted T. Some budders prefer to make the horizontal cut across the top, the cuts then resembling a normal T shape. This is largely a matter of use and individual preference. I consider, however, that the inverted T cut is to be preferred when there is a risk of heavy rain following upon the budding operation. The inverted T cut will shed water should it penetrate the binding material. The presence of water under the flaps of bark, or under the bud, is fatal to its success.

The knife blade is then inserted in the vertical cut near the junction of the two cuts, and the flaps of bark are separated carefully from the wood by raising gently. It is essential that care be exercised in this operation, otherwise the delicate cambial cells on the surface of the exposed wood will be injured. The shoot or stock is now ready to receive the bud.

Cutting the Bud: If the small, almost dormant looking buds are used, difficulty is often experienced in forcing the buds into growth, even after they have successfully healed to the wood of the stock. On this account buds which appear to be "blind," i.e., those generally near the base of a shoot, should be discarded.

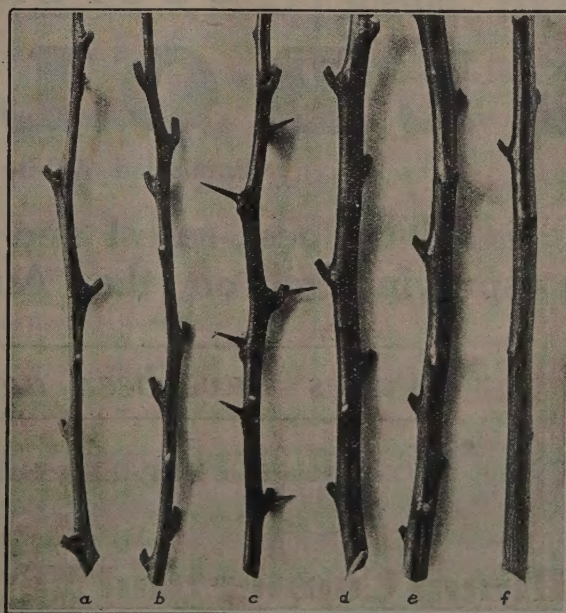


FIG. 1.—SUITABLE AND UNSUITABLE BUD-WOOD.

Unsuitable—a and b, young angular wood; c, thorny buds; and f, wood too old and buds becoming "blind."

Suitable—d and e, well rounded, mature wood with plump, vigorous buds.

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The next step in the budding operation is to remove the bud together with a shield-shaped piece of bark from the bud-stick. The term shield-budding is given to this method from the appearance of the piece of bark containing the bud removed from the bud-stick. This is accomplished by a thin slicing cut commencing about half an inch above the bud and finishing about half an inch below. It is customary to hold the bud-stick in an inverted position while cutting this bud, so that actually the cut commences from below the bud and comes to the surface again above the bud. The cut is made as shallow as possible, but usually a piece of wood also is cut from the bud-stick. This will adhere to the bud and can be readily seen on examination.

Care is necessary in removing the wood from the bud to prevent any creasing or other damage to the small bud itself. Sometimes it is found that, while the shield of bark remains green and has united with the stock, the point or eye of the bud has turned brown and died, and therefore no growth is possible. This is due to an injury caused by rough handling of the bud.

Holding the bud by the small piece of leaf stalk, it is carefully pushed up into position beneath the two flaps of bark on the stock, and these two flaps then close over it. Gently press the bud against the stock.

Tying or Binding: The next operation is to securely tie the flaps into

BUDDING CITRUS TREES.

(Continued).

place and exclude as much air as possible from the bud. For this purpose natural raffia, or prepared waxed tape can be used. Substances of an oily nature should not be employed as they are generally fatal to plant life. Natural raffia which has been wrapped in a damp bag overnight—but not actually watered—will be found pliable and strong. A good practice is to give the raffia a stretching prior to use. If wet raffia is used it will be found that on drying, the binding has become loose, probably with fatal results to the bud. Colored raffia does not appear to be suitable for binding; the dyes used in its manufacture being harmful to the citrus tissue under some conditions.

The entire cut is covered as neatly as possible with the exception of the eye of the bud itself. If the raffia is drawn tightly across the eye of the bud, it will often damage it and the bud will fail. The tie should be firm but not tight enough to cut or bruise the bark. When budding, work as rapidly as possible to minimise the risk of the exposed cambium cells becoming dry.

Waxed Tape.

Many propagators prefer to use narrow strips of muslin, soaked in a wax mixture, for binding material. The advantages of the waxed tape are that it is impervious to air and moisture, thus preventing the bud from drying and rain from entering the wound, and in addition it does not require tying. When binding the bud with waxed tape, commence at the bottom so that the folds will overlap and assist in shedding rain.

Inspection of Buds.

In 10 to 12 days' time the buds can be examined, and if still green, they have been successful. If the eye of the bud has become a brownish color and the shield of bark is still green, then the bud will not grow.

Three weeks after budding the binding can be removed. In the case of re-worked trees, a good plan is to make a loose tie around the base of the budded shoot. This will serve to indicate where the bud had been inserted, because in a few years' time it becomes difficult to distinguish be-

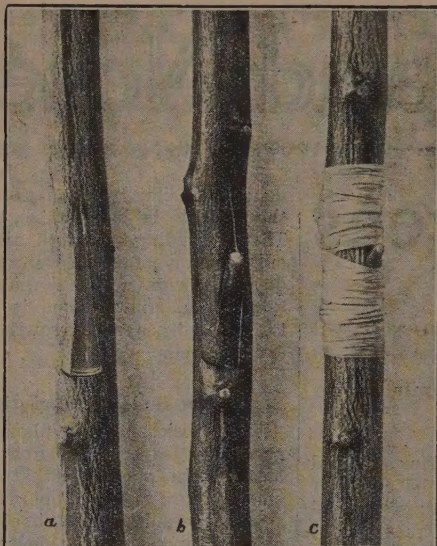


Fig. 2.—Stages in the Budding operation—(a) the prepared stock; (b) bud inserted; and (c) bud tied with raffia.

tween growth from the stock and growth from the bud, unless some such marking device is used.

Forcing the Buds into Growth.

The buds have been inserted at the base of a long shoot, and, usually in this position they do not commence growth unless a strong sap flow is diverted to them.

Various methods have been used to "force" the buds into growth. One method consists in cutting a deep notch about 2 inches above the bud, while another removes a complete girdle of bark an inch or so about the bud. In some countries the practice is adopted of partially cutting through the stem about 2 inches above the bud and then bending the stock over, so that only a small strip of bark continues to feed the broken stock.

The removal of the stock about 4 inches to 6 inches above the newly inserted bud, has been found to give good results in Victoria. The short piece of remaining stock will act as a support to which the young growth of the bud can be tied. Where difficulty is found in forcing the bud into

growth, the entire stock should be removed just above the bud, making a sloping cut to facilitate healing. If this practice is resorted to, it will be necessary to support the young growth by means of stakes attached to the main branches of the tree.

With autumn budding, the removal of the top portion of the stock should be done in the spring, after danger from frosts is passed; but with spring budding, the tops can be removed as soon as the binds are cut.

The buds on the stock, apart from the newly inserted bud, will also burst into growth. These must now be considered as suckers and should be rubbed off while still small. This will be a fairly constant operation every two or three weeks, until the bud has made vigorous growth. The new growth from the bud is very brittle and liable to be blown off, and therefore it should be supported by tying it either to the small stub left when removing the top of the stock or to a stake.

When the bud has made about 18 inches of growth, it should be shortened back to about 12 inches. This



Fig. 3.—Showing position of insertion of bud, growth of bud, topping of stock to force bud into growth, tying bud growth for support, and pruning of growth resulting in branching.

will strengthen the union between bud and stock, and also form a system of branching fairly low in the tree. If this operation is neglected, the bud growth becomes top heavy and liable to break away from the stock.

Subsequently the small piece of stock can be removed when the union is strong. A good plan is to postpone the removal of this stub until the following autumn. A sloping cut should be made as previously described.

U.S.A. ORANGE PRODUCTION.

Doubled Within 15 Years.

An increase in production from 25 million cases of Oranges in 1920 to 51 million cases in 1935, is the record claimed for American Orange growers. The export of Oranges to Europe has been badly hit in recent years by the development of Palestine supplies, but, owing to consistent and heavy advertising in America plus the development of juice drinks and by-products, the home consumption of Oranges in America has increased proportionately with the increase in production.

CITRUS INTERESTS.

Citrus growers in seven of the ten counties of Southern California, spent \$728,000 per year in insect pest control.

:: :: :: ::

The harvesting of Oranges in California was completed in January and was considerably smaller than normal, about half of last year's crop, but Grapefruit experienced a record crop in California and Arizona.

PALESTINE CITRUS SHIPMENTS.

Shipments of citrus fruits from Palestine to the United Kingdom during February reached the total of 429,974 cases according to a report made by the Department of Agriculture, Jaffa. The Continent of Europe also received a further 231,935 cases, showing the enormous strides that have been made in the export of citrus fruits from Palestine in the last few years.

CITRUS CROPS IN N.S.W.

Light to Moderate.

Owing to heavy sheddings, the prospects are now from light to moderate. The State Marketing Bureau on February 26 estimated yields as follows (in bushels):

Oranges, 1,960,000.
Mandarins, 410,000.
Lemons, 250,000.

CITRUS GROWERS!

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CITRUS NEWS AND NOTES—(Continued).

THE N.Z. EMBARGO

Federal Government Negotiating.

NEW SOUTH WALES CITRUS growers are very dissatisfied with the continuance of the embargo imposed by New Zealand upon N.S.W. citrus fruits, and at a meeting of growers held on March 14, it was decided to wait upon the Federal Government and impress the need for the export of Mandarins from that State.

The closing of the N.Z. market was imposing much hardship upon orchardists, and the N.Z. market was clamoring for this fruit and could not get it. It is understood that the N.Z. Government is disposed to consider negotiations with the Commonwealth Government.

Mr. S. L. Gardner, M.P., read a statement by the Assistant Minister for Commerce (Mr. Thorby), pointing out that the Federal Government was closely watching the position. On two occasions recently, it was stated, the Government had offered to send delegates to the Dominion. The New Zealand Government, however, had asked that the visits be postponed. The Federal Government would re-open the matter at the first opportunity.

The meeting passed the following

resolution: "Realising that the loss of the N.Z. market is one of the primary causes of the deplorable conditions existing in the citrus industry to-day, this representative meeting of the growers urges the Federal Government immediately to take the necessary steps so that Mandarins may again be exported to that market as from the commencement of this season."

A report from Canberra on March 18 says that the Minister for External Affairs (Sir George Pearce) announced in the Senate, that the Federal Ministry had opened negotiations with the New Zealand Government in an effort to compose the differences which prevented the export of citrus fruit from New South Wales to New Zealand.

On the motion for the second reading of the Orange Export Bounty Bill, Senator Hardy said that the time was opportune to send a Minister to New Zealand. He believed that the Labor Government in New Zealand would look with sympathy upon representations made with the object of placing the Australian citrus grower on his feet.

EXPORT BOUNTY ON CITRUS.

1934 and 1935 Shipments Affected.

ON March 18 the House of Representatives passed a Bill introduced by the Acting Minister for Commerce (Mr. Thorby) to provide for the payment of a bounty of 6d. a case on Oranges exported to countries other than New Zealand during the 1934 season.

Mr. Thorby said that a large quantity of the 1934 exports had arrived in poor condition, and that the prices realised were generally unsatisfactory. Parliament had already provided sufficient funds to meet the commitment of £5,500, as the export bounty of 2/- a case for the 1935 season would absorb only £8,000 of the amount of £20,000 provided in the estimates.

Previous to this, on February 27, the Commonwealth Government had decided to grant a retrospective bounty of 6d. per case on all citrus fruit shipped to countries other than N.Z. during 1934. More than 216,000 cases were involved, representing a payment of £5,400 in bounty.

Regarding the prospects of a bounty for the forthcoming 1936 season, Mr. Thorby said that prior to the legislation which provided for a bounty on exported citrus was passed, growers were informed that it was essential they should be organised, so that something definite could be done for the industry instead of growers being forced to appeal year after year for assistance from the Government.

Up to the present no assurance had been given by the citrus associations that they had organised in the manner requested. He was waiting for some definite information from them, so that the Commonwealth might be able to do something in the matter.

VICTORIAN CITRUS CROPS.

The citrus crop is advancing well, reports the Dept. of Agriculture. In the Goulburn Valley it is anticipated that a fully 100 per cent. crop of Valencias will be harvested later. Navels also promise a good crop. Valencias from last season are still being harvested from the Rochester district.

In the Swan Hill-Tresco-Murrabit areas, the crop will be quite as good as the early estimates. Navels show good to medium heavy; Valencias, heavy; Mandarins, light to medium; and Grapefruit, medium to heavy. Last year's Valencias from Murrabit are now being harvested.

SANCTIONS ON FRUIT.

Italian Lemons Seized.

Squads of men were kept busy at Covent Garden recently in removing wrappers from 150,000 Lemons imported in 400 cases.

The cases had been seized by Customs officers under sanctions regulations—because the Lemons were Italian grown.

They had been wrapped, says the London "Daily Express" in paper that bore the words "Produce of Syria" and each Lemon had to be unwrapped before it was sold, as the authorities would not allow the fruit to go to the public under false pretences.

Though the wrong designation of the country of origin is legally immoral, the Lemons remained Italian-grown and the removal of the wrappers to allow their sale in England was apparently condoned by the authorities in spite of an announced embargo upon Italian goods.

80 MILLION CASES

U.S.A. Citrus Crop Forecast.

The Agricultural statistician of the Californian Department of Agriculture has supplied some huge and interesting figures regarding the anticipated 1936 citrus crop. The rains experienced during January, however, caused reports of slow fruit growth which may be reflected in more than the usual percentage of small-sized Oranges.

The total Orange crop for Oranges

in all States is predicted to be over 50 million cases, Grapefruit is expected to harvest nearly 20 million cases, and California Lemons about 8 million cases, with some 10,000 cases of Limes from Florida, making a grand total of close to 80 million cases.

As a comparison with other years, he presents the following study of production:—

Production—Case Basis.

	1932/3.	1933/4.	1934/5.	Forecast 1935/6.
Oranges	51,368,000	47,289,000	64,937,000	51,526,000
Grapefruit	15,149,000	14,243,000	21,357,000	18,140,000
Lemons (Calif.)	6,704,000	7,295,000	10,506,000	8,000,000
Limes (Florida)	10,000	8,000	8,000	10,000

Thus 1934/5 was an outstanding year of production of all citrus fruit, and the forecast for this season is well above the two seasons prior to that record.

SEASONABLE CITRUS NOTES.

Budding Over With Selected Varieties.

IN CITRUS ORCHARDS where unprofitable trees have been cut back preparatory to budding over with selected varieties, the thinning of new growths may be completed, leaving two well-grown shoots suitably placed near the end of the shortened arms. When the new shoots have attained some 3/4 inch in diameter and the sap is flowing freely, budding may be commenced.

When the shoot is ready to receive the bud a perpendicular cut is made in the bark in some suitable position near the base of the shoot from 1 to 1 1/2 inches long through to the cambium layer. Another cut is made across the perpendicular line. The two cuts when made appear thus — T.

Budwood should only be taken from selected trees which are healthy and noted for their consistent production of heavy crops of quality fruit. Such budwood should be chosen from well-rounded, mature wood about the thickness of a lead pencil and not more than one year old. Before the buds are cut from the budstick, the leaves are trimmed off, a piece of the leaf stalk or petiole being left, and by this means the bud can be more easily handled after cutting. The buds may be cut off the stick upwards or downwards. The general practice is to cut from below the bud up, starting about 1/2 inch below the bud, ending about 1/2 inch above.

The cut should be made with a sharp thin-bladed knife, cutting just deep enough to remove a very thin layer of wood. The wood may be carefully removed from behind the bud, care being taken not to damage it. The bud is then inserted down and under the bark by raising the latter with the budding knife. In order to bring the bud and stock in close contact they are bound tightly together with a raffia tie. In two or three weeks the bud, if it remains green, will have taken. The tie should then be cut to prevent throttling. When the budding has been done in the autumn it is better to leave the shoots

as they are until the following spring, when growth may be started by removing a portion of the top of the shoot to within three or four inches of the bud, the stub being utilised to tie the bud to until it is strong enough to support itself. The stub may then be removed by a sloping cut from just above the bud.—R. L. Prest, in "Queensland Agric. Journal."

DR. YOUNG GOES TO ENGLAND.

To Investigate Orange Culture and Preservation.

Dr. W. J. Young, who has been directing research in the storage and preservation of fruit for export for the Council for Scientific and Industrial Research in the bio-chemistry department of the University of Melbourne, left for London on March 17. He will also visit Palestine, where he will investigate the conditions of Orange culture and preservation.

In England Dr. Young will work in the fruit research laboratories, and he will examine the condition of Australian fruit on arrival in London.

The object of the work is to improve storage conditions for Oranges, so that the wastage in transit to British markets may be overcome.

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A RIDDLE FOR CLEANING CURRANTS.

A very practical way of getting rid of a lot of mould on the Currants by the grower himself is to make a sloping riddle or screen something like that used for "screening" rubble, and to "roll" the fruit down it. The fruit drops into boxes placed under the sloping riddle or screen, and the mouldy, matted stuff goes on down to the end of the screen to drop into a box placed there. What is known as "bird wire" is the material used for riddling purposes, and the outfit can easily be home-made.

W.A. DRIED FRUITS.

At a recent meeting of the W.A. Dried Fruits Board, the chairman explained that consideration is being given to the protection of growers' interests in the event of the James appeal being successful. It was reported that increased planting was going on in the Swan district, in spite of the board's advice against it.

The approval of the Minister of Commerce had been obtained for the opening 1936 export quotas to be—Currants 80 per cent., and Lexias 70 per cent.

Under the auspices of the Victorian Dept. of Agriculture, broadcast talks will be given as follows from Station 3AR Melbourne, from 6.40 p.m. to 7 p.m.:—

April 24: Maturity standards for citrus—(Mr. J. L. Provan, B.Ag.Sc., Horticultural Research Officer).

May 1: Selection and storage of Potato seed—(Mr. J. T. Ramsay, Potato Expert).

Cold Storage In Australasia

COLD STORAGE OF TROPICAL FRUIT

(By WILLIS J. WILLIAMS, B.Sc., F.C.S., Superintendent of Markets, Sydney.)

MOST OF THE TROPICAL fruits in Australia come from the northern part of New South Wales and Queensland. Difficulty has been experienced in sending these fruits from these areas to the southern and western parts of Australia, so that they will arrive in good order and condition and with full flavor. The difficulty with these fruits is, that they bruise so easily and mould growths appear on the surface of the skin, and the fruit goes bad before it can be consumed. To overcome this to a certain extent the fruit has been shipped in a green condition in ordinary air temperature, but when it arrived at these distances it has, unfortunately, lost a good deal of its flavor on account of the fact that the fruit has not matured and, therefore, does not ripen in the proper manner.

Experiments have been conducted with the object of seeing how long tropical fruits will keep in cold storage. In conducting these experiments some of the fruit was put into rooms without an air circulation. This fruit did not keep quite so well as where a gentle air circulation was used.

Granadillas.

Granadillas should be picked firm. They are a light green in color and when ripe there is a tinge of yellow throughout the skin. The fruit was kept at 40 and 50 degrees, and the humidity in both cases was 88 per cent.

At 40 degrees the ripe fruit was placed in store and became quite soft at the end of ten (10) days. Other fruit which was more on the green side showed a slight color at the end of ten (10) days and when placed in a temperature of 65 degrees in a few days became quite ripe. Other fruit was kept at 50 degrees for twenty (20) days, the yellow ones became quite ripe when placed in a room at a temperature of 65 degrees after a couple of days, while the greener ones took longer, but it is doubtful whether the flavor was quite so good.

Some of the fruit in these experiments was wrapped while other fruit was unwrapped. It was found that the wrapped fruit kept better than the unwrapped. These Granadillas were packed in dry grass to prevent bruising.

Papaws.

When picking Papaws it should be seen that they are thoroughly dry, skin clean, no breaks and no appearance of mould on the skin of the fruit. They should be decidedly firm, green in color with a yellow tinge in the skin.

It was found advisable to wrap the fruit as it kept better than unwrapped fruit. This fruit bruises easily and corrugated strawboard was used inside the case.

Experiments proved that the smaller sized fruit kept much longer than the large. There are two types of Papaws, one thick skinned and one thin skinned. The thick skinned fruit is preferable for cold storage.

Papaws kept at 35, 40 and 50 degrees respectively, with a humidity of 88 per cent. It was found at 35 and 40 degrees that the fruit kept for twenty-one (21) days, whereas at 50 degrees it was found that mould had

appeared on several parts of the skin, and the fruit was over-ripe. The flavor was tested and those at 35 degrees were, undoubtedly, better than those kept at the higher temperatures.

The dipping of the fruit in a two per cent. (2%) solution of formalin, showed that there was no difference between it and fruit that had not been treated. It is advisable to leave half-an-inch stalk on this fruit and, if possible, the stalk should be sun dried before the fruit is stored. This will heal up the wound and prevent mould growth.

Tests were made with:—

- (1) Fully matured fruit, green.
- (2) Fruit with traces of yellow in the green.
- (3) Decidedly ripe and yellow fruit.

The temperatures used were 35, 40 and 50 degrees with a humidity of 88 per cent. (88%).

At the highest temperature there was a good deal of wastage at the end of seven (7) days. At 40 degrees the fruit held for fourteen (14) days and there was a good deal of waste. At 35 degrees the fruit remained in good order and condition for twenty-one (21) days.

It was found that green fruit with a trace of yellow kept better than the decidedly ripe and yellow fruit. The fully matured fruit green kept best at the lower temperature. The green fruit, after being in store ripened very slowly at 65 degrees, proving that it is necessary to have a certain amount of yellow in the green for successful storage.

Papaws that are placed in store should be placed in a room at a temperature of 65-70 degrees so that they might ripen before being placed on the market.

Mangoes.

Experiments were conducted with Mangoes at 35, 40 and 50 degrees. The fruit was sound, green with a slight tinge of color in the skin, and fully matured. Each fruit was wrapped separately and packing was used inside the case to prevent bruising.

At 35 degrees fruit kept up to 35 days in good order and condition. At 40 degrees the fruit started to break down at the end of 21 days. At 50 degrees the fruit shrivelled badly and decay had set in at the end of 14 days.

Summary.

- (1) Tropical fruit must be carefully handled, as they bruise easily.
- (2) Mangoes and Papaws should be green, with a slight tinge of color, very firm, stalks left on.
- (3) The best temperature for Mangoes and Papaws is 35 degrees, with a humidity of 88 per cent.
- (4) Papaws will keep up to 21 days; Mangoes for 35 days; Granadillas about 10 days.
- (5) After storage tropical fruit should be placed in a temperature of 65 degrees to ripen before being placed on the market.

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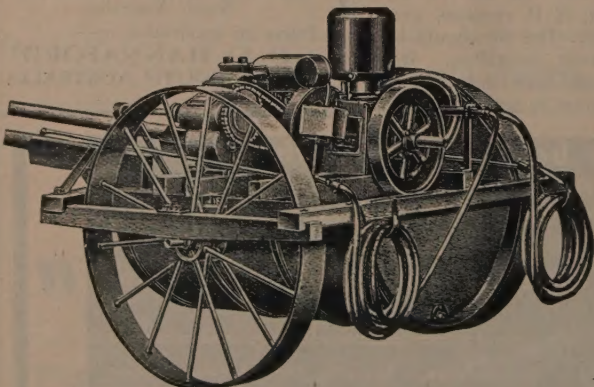
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Advertising Australian Canned Fruits . . Exhibits in Canada

Reports have been received by the Department of Commerce from the Australian Trade Commissioner in Canada, Mr. Macgregor, regarding the steps taken by him to advertise canned fruits in Canada last year.

Advantage was taken of the opportunity afforded by the Canadian National Exhibition held in Toronto in August and September last to include an exhibit of canned fruits in the Australian Court, and all brands were prominently displayed to the public. Subsequently, a similar exhibit was shown at exhibitions held in Winnipeg and Vancouver.

Many favorable comments were received concerning the high quality of the Australian products as offered for sale on the Canadian market.

Scenes depicting the Australian fruit growing and canning industries were included in a moving picture film prepared by the Cinema Branch of the Department of Commerce, which was widely shown throughout Canada

during the period from August to December, 1935, and slogans were included in the film bespeaking public support in the purchasing of Australian canned fruits.

Arrangements were also made for special window displays at a number of leading department and retail stores and principal retail organisations have featured Australian canned fruits in their advertisements without the usual charge which it is customary to make for this service.

The campaign to popularise Australian canned fruits and to invite attention to the attractions of Australia as a tourist resort were supplemented by radio talks and addresses to business organisations and schools. A special travel section was arranged by Mr. Macgregor at each of the exhibitions held at Toronto, Winnipeg and Vancouver, where attractive photographs and posters were displayed and literature published by the Australian National Travel Association was distributed.

NEW PRODUCTION RECORDS.

Shepparton and Leeton Busy.

By processing 226,400 tins of Pullars Cling Peaches on March 10, the Shepparton Fruit Preserving Co. has broken its own record. The recent warm weather had the effect of bringing a large quantity of fruit to maturity a little earlier than was expected, and the cannery has been working at high pressure. Peaches this season have been unusually free from diseases such as Oriental Peach moth or brown rot, and there has been practically no hail damage, for which growers collected £30,000 in insurance last year.

Leeton cannery also excelled itself one day recently in processing 203,000 cans in 11 hours, representing some 160 tons of Peaches and something like 300 tins per minute during the day.

In quietly reporting this record, the manager, Mr. Brady, said that the cannery was enjoying one of the smoothest seasons in its history, in spite of the prevalence of some hail-marked fruit at times which entailed a great deal of extra labor. On the whole it can be said that the fruit received this season was large, clean and of excellent quality and last year's record of 4,500 tons will almost be reached.

The cannery needed 923 employees during the peak period represented by 644 women and girls and 279 men and boys.

UN-CANNING THE FRUIT.

Scientists have learned how to can almost every kind of food. They have even evolved cans to fit the hip pocket, long ones, short ones, fat ones, and

every conceivable shade. Canning is easy to them. It is easy to get the fruit into the can, but they have not yet properly developed a simple means of un-canning it like they have with glass containers.

The usual business of opening the average can requires patience, artistry, a gadget that will rip tin, the risk of cut hands, and the possibility of bad language. Why not simplify it? There is a fortune awaiting the man who can invent an easily un-canned can.

THE CORROSION OF TIN

The corrosion resisting properties of tin are the reason for its use as a coating metal over steel in the form of tinfoil. In several of its uses tinfoil is exposed to corrosive conditions, and in some of them the tin itself is attacked. A review by Dr. T. P. Hoar of the mechanism of the corrosion of tinfoil under conditions such as those obtaining in the cans used for packing foodstuffs, has just been published by the International Tin Research and Development Council (England).

The corrosion of tin and of steel, separately and together, is considered. Two main types of attack occur with tin, depending on whether the protective oxide film formed by exposure to the air is completely removed or merely partially penetrated. The attack on steel by acid liquids depends very much on the presence of traces of inhibitors such as proteins and tin ions and accelerators such as sulphide, and also, whether or not air is present.

In tinfoil, tin and steel form an electrolytic couple which in recent years has been closely investigated, and it has been established that the tin or the steel can be cathode in the tin-steel couple under suitable conditions. If the tin dissolved forms stable complexes with the anions of the attacking medium, tin will normally become anodic to the steel. As regards corrosion, steel has peculiarities which have only been discovered recently and these have also to be taken into account.

Another factor is the layer of tin-iron compound always present between the steel and its tin coating, and is the subject of investigations which are still proceeding. Several factors which tend to reduce corrosion in sealed food cans and the use of lacquers for the same purpose are dealt with.

Among the practical remedies for tinfoil corrosion are coating with lacquer or with electro-deposited tin and improvement of the steel base.

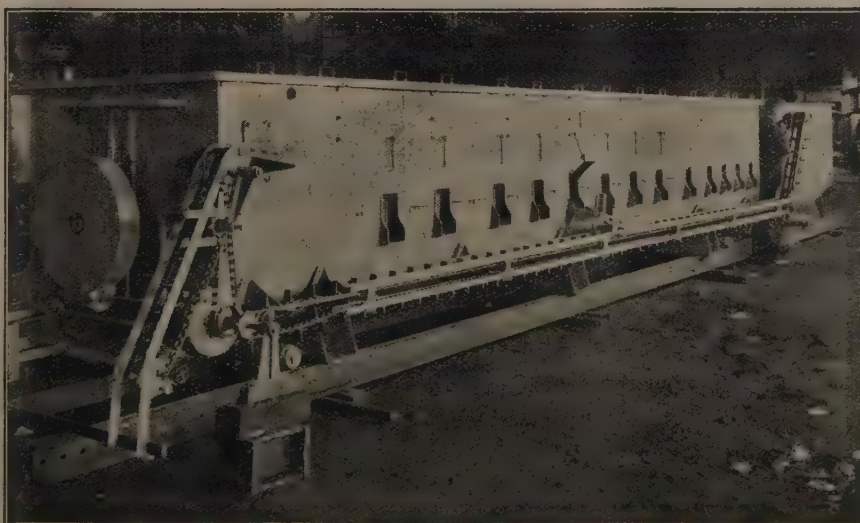
CANNED FRUITS EXPORTS.

January and February Returns.

The Canned Fruits Control Board report the following exports from the commencement of the season (January 1) to February 29, expressed in dozen tins of 30 oz. or equivalent.

Country.	Apricots.	Peaches	Pears.	Pine-Apples.	Fruit Salad.	Total.
U.K.	50,868	34,554	100,665	—	—	186,087
N.Z.	1,144	326	158	100	—	1,728
Canada	822	1,622	—	—	—	2,444
East	675	1,448	1,313	—	138	3,574
Miscellaneous .	127	211	388	40	2	768
Total	53,636	38,161	102,524	140	140	194,601

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CANNING AND JAM FRUITS.

(Continued.)

LONDON REPORT.

Imports of canned fruits in 1935 continued the upward trend which has been unbroken since 1930, and amounted to 3,691,000 cwt., valued at £6,057,000, or 7 per cent. increase over 1934. Of this quantity, Empire countries provided 39 per cent. All varieties except Pineapples, Currants and berries shared in the increase.

As a comparison with the previous two years, and expressed in thousand cases, the figures are:—

	Apricots	Peaches	Pears	Others	Total
1935	640.7	2,209.8	2126.9	3893.1	8870.5
1934	541.8	1908.5	1916.2	3884.4	8250.7
1933	559.0	1692.2	1797.9	3284.2	7,233.3

The chief supplying countries during 1935 for all fruits preserved in syrup were:—U.S.A. 2095 thousand cwt.; Malaya (mainly Pineapples) 801; Australia 463 and Canada 117. Empire countries supplied 38.6 per cent. of the total supplies, and foreign countries 61.4 per cent.

Of the above varieties, Peaches and Pineapples each represented 24.0 per cent., Pears 23.2, and Apricots 7 per cent.

EXAMINATION OF FRUITS AND JAM.

Lead Precipitation Test.

Under controlled conditions of precipitation the acid constituents of fruits and jams can be separated into three groups: (1) citric and tartaric acids, which are completely precipitated by lead acetate from aqueous solution; (2) malic and similar acids, which are partly precipitated from aqueous, but completely from 50 per cent. acetone medium; and (3) lactic acid and acids behaving like it, which are not precipitated from either medium. The action of Strawberries, Raspberries and Currants falls mainly into the first group; those of Apples into the second; those of a few other jam fruits are mixed in type; whilst those of stone fruits are chiefly of the second group, but might contain acids belonging to the third. From

the empirically determined "lead number" and the data for average acid content and lead number of the individual fruits, the proportions of ingredients in certain mixed products could be calculated approximately if the character of the acids differed sufficiently. In particular, the method is useful in arriving at the proportion of fruit in jams containing Apple juice or commercial pectin.

CANNED APRICOT PACK.

Record of 380,000 Cases.

Information issued by the Canned Fruits Control Board indicates that the Australian canned Apricot pack this season aggregated 380,000 cases. This figure is a record and exceeds last year's pack by more than 100,000 cases. The previous highest figure was in 1930, when 277,000 cases were canned.

The increase is reflected chiefly in Victoria and New South Wales. Approximately half the Apricots canned this season were grown in Victoria.

FRUIT AND DIET.

British Health Suffering.

According to a report received from London, the diet of half the population of Great Britain is lacking in commodities that can be supplied by the Dominions, and is inadequate to maintain full health. Millions of men, women and children are not reaching full physical development because of poor feeding.

This is the conclusion arrived at by Sir John Boyd Orr, Director of the Rowett Research Institute of the University of Aberdeen who studied the position at the request of the Market Supply Committee in Great Britain.

Grave deficiencies in the consumption of fruit, vegetables, milk and eggs are reported, and substantiates the stand taken by Mr. Stanley Bruce at Geneva recently, when he called the attention of the world to grave under-nourishment of the masses.

Sir John Orr points out that if the value of the average weekly consumption reached 10/- per week per person, Great Britain would require an extra £270 million worth of food every year, a large proportion of which would come from increased Dominion supplies. He further states that the weekly average consumption per person is: butter, less than $\frac{1}{2}$ lb.; eggs, 2.9 only; fruit, ninepence, and jams, jellies, etc., only 5.2 ounces. These, he states, should all be increased by 12 to 25 per cent. for adequate diet requirements.

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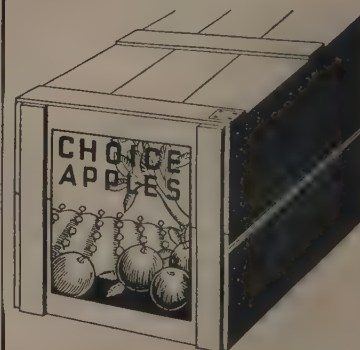
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Dried Fruits Department

IMPORTANCE OF DRIED FRUITS INDUSTRY.

Tremendous Developments at Mildura.

Power to Regulate Trade Essential.

WHEN the Victorian Farmers' Convention met at Mildura at the end of March many items of interest were discussed.

The importance of the dried fruits industry was stressed by Mr. Peter Malloch, of Irymple, one of the stalwarts and a leader of the industry.

Mr. Malloch said that the removal of protection would mean a reduction in the standard of living of dried fruits growers to that of the peasants of Greece, Armenia and Turkey, with wages at from 1/- to 3/- per day. Mildura, he said, was taken up for grazing in 1846. Before the rabbits came it was a good run for sheep, but afterward it would not carry more than one sheep to ten acres, and 29,600 acres supported a population of, say, 12 persons, with an average annual income of about £1,500.

To-day production might be estimated at £1,602,000, including 40,000 tons of dried fruits, worth £1,400,000; 270,000 cases of citrus, worth £185,000; 20,000 tons of fresh Grapes, yielding £12,000; and 100 tons of dried tree-fruits, worth £5,000. Revenue,

therefore, had been increased one thousand times, and land values had increased from £29,600 to £7,200,000.

"The loss of power to regulate trade in the Commonwealth will mean a loss of £200,000 a year to the industry, as it involves a loss of power to control Commonwealth prices," continued Mr. Malloch. "Australia is pledged to a policy of protection, and protection carried to its logical conclusion should be protection for all. Why should the farmer be barred from its advantages, if there are advantages? We do not believe in using the tariff to exploit consumers.

"For five years the protective tariff on Raisins has been 6d. per lb., but the Australian price has averaged only 2½d. per lb. above export parity. If the same common-sense policy was exercised by all who have tariff protection, Australian industry would probably be much better off. To bring dried fruits prices to export parity would mean a reduction of the standard of living of our growers to that of the European peasants. Even in California Americans cannot work their vineyards on export parity returns. The greater part of the vineyards were leased to Armenians, Chinese, Japanese and Mexicans, who have to live on miserable returns for their labor. Recently I visited California, and I did not meet any grower who could speak English."

LONDON REPORT.

The London market for dried fruit was quietly steady in January, except during the last week, when reports of heavy damage to Currants by rain was received from Australia. Prices for both Australian and Greek Currants advanced. In December, 5,100 tons of Raisins and Sultanas were landed, an increase of 60 per cent. over December, 1934, but 63 per cent. decrease over November. Currants recorded imports of 3,100 tons in December, 1935, as against 1,800 in December, 1934.

Taking December as a basis, the total quantities imported in December during the past three years is interesting. Recorded in 1,000 cwts., the figures are:—

Raisins and Sultanas.	
1935	101.3
1934	63.4
1933	84.0
Currants.	
1935	61.0
1934	22.5
1933	38.2
Plums and Prunes.	
1935	108.4
1934	48.8
1933	79.5
Apples, Pears, Peaches and Nectarines	
1935	10.4
1934	3.2
1933	—

DRIED FRUIT EXPORTS.

Active Canadian Demand.

The Commonwealth Dried Fruits Export Control Board is advised by its London agency that in the two weeks ended March 12, 347 tons of Australian dried fruits were sold in Britain. The sales represent clearing transactions of the last season's harvest. From the harvest of 1935 30,443 tons were shipped to Britain, of which a little more than 600 tons remain unsold. Shipments of new season's fruit have begun, and 1,118 tons of Sultanas and 104 tons of Currants are being shipped to Great Britain.

Business with Canada is reported to be active. It is expected that in the next two weeks substantial shipments of Sultanas will be made from Adelaide and Melbourne. The demand from Canada is particularly keen because of the shortage of spot supplies. The quality of the Sultanas is likely to be very good, because of favorable climatic conditions in the last four weeks.

GOOD REPORTS TO HAND.

A report from Swan Hill states that Grape-picking is completed, and growers have delivered to packing sheds at Woorinen-Nyah about 75 per cent. of the fruit harvested. The season has favored dipping, drying and processing of the principal crops of Sultanas, and the methods adopted have improved the grade of fruit. There has been general co-operation in seeking uniformity in methods of dipping and drying. It is stated that at Woorinen, Nyah, Koraleigh, Goodnight and Tresco growers have worked harmoniously in a plan to produce higher grade fruit. Furthermore, the fruit from Tresco has comprised the greater proportion of high grades for the Victorian portion of the area, and Koraleigh and Goodnight for the N.S.W. districts. As most of the remaining fruit is under cover of drying racks there is not likely to be any reduction in the quality of fruit.

VICTORIAN PRODUCE.

A Compliment from London.

Mr. J. M. Balfour, chairman of the Victorian Dried Fruits Board, has received the following from a friend who holds an important office in the Ministry for Health, London:—"I write to thank you on behalf of all of us, for the very excellent Christmas gift you sent us. A man comes around every week with a smart motor van, and sells all sorts of Australian produce—dried fruits, honey, butter, etc. He also sells stoned Raisins, which are excellent."

SOUTH AUSTRALIAN DRIED FRUITS.

Advertised in Canada

The Australian Trade Commissioner in Canada, Mr. L. R. Macgregor, recently arranged displays of Australian produce in the Canadian National Exhibition in Toronto, one of the largest annual shows in Canada. Included in the displays were scenic displays of Adelaide, advertising the South Australian Centenary, and exhibits of dried fruits and wines. Suitable literature was also distributed to the thousands who attended.

After the Toronto Exhibition closed, he used the display in other Canadian centres, particularly in Winnipeg and Vancouver, during the summer months. He reported quite a lot of interest in the Australian display.

1936 PRICES.

The 1936 prices for Sultanas, Lexias, Walthams and seeded Raisins have been announced by the Australian Dried Fruits Association, as follows:—

Sultanas (single-box price).—Five-crown, 8½d. per lb.; four-crown, 7½d.; three-crown, 7½d.; two-crown, 7½d.; one-crown, 7½d.; plain, 7½d. Lexias and Walthams.—Six-crown, 6½d.; five-crown, 6d.; four-crown, 5½d.; seedless, 6½d.; three-crown, 5½d.; two-crown, 5½d. Seeded Raisins.—1-lb. cartons, 7/9 a dozen; 12-oz. cartons, 6/4½; 8-oz. cartons, 4/6; bulk, 7d. per lb.

SUBSIDY ON PRUNES.

Sum of £8,400 Involved.

The Prime Minister (Mr. Lyons) announced recently that the Federal Cabinet had decided to grant assistance to Prune growers at the rate of ½d. per lb. on exports from Australia in 1935.

Because shipments in that year amounted to approximately 1,200 tons it is estimated that the amount involved will be approximately £8,400. Mr. Lyons added that on shipments in 1936 a subsidy of ½d. per lb. would be paid. Production was expected to be lower this year, so that it was estimated that the amount payable on 1936 shipments would not exceed £4,500.

MANY ENQUIRIES.

At British Industries Fair.

It is reported from London that the recent British Industries Fair which was held in Birmingham resulted in a heavy increase of purchases in all departments. In this Australian dried fruits participated and many enquiries for supplies came from European buyers

FRUIT DRYING.

Some Interesting Tests.

The Woorinen-Nyah dried fruits inquiry committee recently held a field day on Block 38H, Woorinen North, at which were exhibited 50 samples of fruit dipped to test the suitability of various dips. The fruit from the block was harvested by Mr. D. V. Walters, of the Commonwealth Council for Scientific and Industrial Research, Merbein Experimental Station. He was assisted by Mr. D. D. Brown, of the Department of Agriculture.

The aim was to demonstrate desired color, texture and intensity, showing growers the results of bleaching, washing and sunning. An interesting feature was the exhibits cold-dipped and damaged through slower drying, having been caught by the rain. These were contrasted with similar fruit picked and dried by quicker dips, which escaped the rain. Most valuable information on these tests was given by Mr. Walters to growers.

You Can't Get Good Prices for Bruised Fruit



Obtainable from Leading Distributors throughout Tasmania.

In the following Sizes and Quantities:—

DUMP CASES—			
SIDES (Plain or Vented)	17 x 13	500's	
TOPS AND BOTTOMS	17 x 8	1,000's	
CANADIAN CASES—			
SIDES	17 x 10	1,000's	
TOPS AND BOTTOMS	17 x 11	1,000's	
PEARS—			
SIDES	13 x 6	1,000's	
TOPS AND BOTTOMS	13 x 12	500's	

Also Combination Packs of:—

DUMPS	CANADIAN	PEARS
(500 17 x 13)	(500 17 x 10)	(334 13 x 6)
(500 17 x 8)	(500 17 x 11)	(334 13 x 12)

Anti-Bruze Corrugated Fruit Pads
MADE IN TASMANIA.

Fertilising Orchards and Vineyards

(B. Boehm, Light's Pass, South Australia.)

THE PRACTICE OF MANURING has not kept abreast of the other branches of horticulture, such as spraying, pruning, etc. In the fifteenth century the value of marl, chalk, ashes, soot, blood, and decayed corn, etc., was recognised as a manure, yet to-day it cannot be said that the application of a certain quantity of a certain kind of fertiliser will give a certain increase of fruit. The wheat grower knows for certain that if he applies a quantity of superphosphate he will receive a certain increase in yield. Likewise, the pastoralist knows that if he topdresses his land he will be able to grow heavier and better pastures.

In fruit and vine growing, however, one can only point to isolated instances where the application of manures has proved of benefit. The Berri Orchard has proved that under

irrigation an application of 5 cwts. of sulphate of ammonia to citrus trees has been very profitable. Under irrigation practices manuring is much more general than in non-irrigated land. In some instances up to a half a ton of fertiliser is applied per acre.

Mr. H. N. Wicks, in a paper, "The Problem of the Off Year in Apple Cultivation," has proved that an application of sulphate of ammonia has been of benefit to Apple trees. On the other hand, an experiment conducted on Messrs. Plush's property at Light's Pass, an application of superphosphate actually decreased the yield of Apricots, yet applied in conjunction with sulphate of ammonia resulted in an increase of about $\frac{1}{2}$ bush per tree.

Another experiment in the Barossa district, it is hoped, will prove of benefit to Apricot growers. In this

soil, sulphate of ammonia and complete manure, as against no manure, are being replicated three times. The test is now in its second year. The result of the first year is very encouraging as regards the last harvest, and also the condition of the trees for this harvest.

Then there is the experience of growers as a whole. Some have not worried about the subject at all, being content to take from the ground as much as it will give, and in return put nothing back, which is a poor policy. Again, others are very enthusiastic about potash, superphosphate, nitrogen, cover crops, etc., but as a result of all this the grower cannot point to anything definite of what to apply, how much, where, or when. To overcome these problems it is hoped that the Department will at some time take the matter up. In the meantime, however, every grower should start to make some simple comparisons himself, such as, say:—

- (1) Complete manure against no manure.
- (2) Sulphate manure versus no manure.
- (3) Green manure against bare ground.

- (4) Stable manure against no manure.

The average grower could do this by dividing a fairly uniform block of trees or vines growing on apparently the same class of soil, treating half the block with the proposed manure and leaving the other half alone. The grower will soon get interested in his experiment, and after some years—by noting the harvest and the condition of his trees and vines—he should be able to determine a plan of manuring suitable to his particular locality and conditions.

In this proposed comparison phosphoric acid has been omitted because, although it is essential to the cereal grower, it seems fairly safe to say that super applied as a tree or vine food is a failure. There is, however, another use for it; top dress a portion of the garden with, say, 2 cwts. of super per acre in early autumn with the object of making the natural grasses grow; these can be ploughed under to increase humus. Sulphate of ammonia could also be tried in a like manner.

Green Manures.

It will possibly be contended that the practice is too risky, and it is admitted that in some years without irrigation it will not be possible to plant the seed early enough, but where the rainfall is 20 in. or over, or where irrigation can be applied—even if only on a small scale—the risk of using too much moisture is well worth while, because there are certainly very few, if any, fruitgrowing areas where a supply of humus is not essential.

Superphosphate comes into its own here, too, when the seed is sown a dressing of, say, 2 cwts. of 3 cwts. per acre will give the crop a good "kick off." The crop must be sown early to obtain the maximum bulk some time before bud burst. The crop should be turned under two or three weeks before bud burst. Late turning under at tree blossoming or after should be accompanied by an application of 1 cwt. or 2 cwts. of sulphate of ammonia in order to prevent the locking up of available nitrogen by soil bacteria and consequent short supply for the trees, which it is estimated take in about

90% of their plant food

at or prior to bud burst. Lime is also important. In land that has been under cultivation for years the finer particles of lime have probably been baked into the subsoil in heavy ground. Lime also is necessary to improve the texture. Green manuring also tends to bring more acid into the ground, and lime will again be necessary.

There are about a dozen elements essential to plant life, but of these it appears that only four need concern the grower; these are nitrogen, phosphate, potash, and lime. By applying any one of the latter another may automatically become deficient. For instance, there may be a shortage of nitrogen, but as a result of the increased growth due to added nitrogen, there may be insufficient phosphate to maintain this extra growth, and so a phosphate deficiency results. Likewise, if phosphate and nitrogen are applied, these may expose a scarcity of potash.

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Interstate News & Notes



New South Wales Fruitgrowers' Federation of N.S.W.

Australian Citrus Advisory Council Discussed :: Citrus Export, Deletion of "Plain" Grade Recommended :: Efforts to Have N.Z. Citrus Embargo Lifted :: Mr. E. Ray Asked to Visit Other States to Observe Administration of Apple and Pear Export Grading Regulations :: Codlin Moth Research Needed :: Assistance to Banana Growers to Combat Bunchy Top :: Fruit Fly Parasites :: Prune Export Bounty :: Granny Smith Memorial :: Street Barrows.

A MEETING of the Board of the Fruitgrowers' Federation of N.S.W. was held at 11 Bligh-street, Sydney, on March 4, 5 and 6, 1936.

There were present: General J. Heane (in the chair), Messrs. A. U. Tonking (Orange), T. A. Tester (Young), K. H. Todd (Griffith), E. Ray (Bathurst), F. B. Mackenzie (Kurrajong), H. C. Matheson (Grose Wold), P. W. James (Dural), T. A. Haerse (Liverpool), A. S. Brown (Ourimbah), A. E. Lillierapp (Mangrove Mountain), A. J. Taylor (Warkworth), S. C. Martyn (Armidale), H. L. Anthony (Murwillumbah), L. T. Pearce (Market Representative), and E. E. Herrod (Secretary).

There were also present during certain sessions of the meeting, Messrs. W. B. Gurney (Government Entomologist), H. Broadfoot (Fruit Expert), H. A. Stevenson (Banana Growers' Federation).

Apology from Mr. A. E. Herring, Federal Citrus Council.

The President reported having attended a meeting of the Federal Citrus Council in Melbourne on February 6. The questions discussed by the Council are dealt with separately under their respective headings.

It was decided that affiliation with the Federal Citrus Council be maintained by the Federation for the present year and that a further endeavor be made for the reorganisation of the Council or for the creation of another body more acceptable to the Federation.

Australian Citrus Advisory Council.

The President reported the discussions that took place at the Federal Citrus Council meeting in respect to the proposed formation of the Australian Citrus Advisory Council.

Correspondence from the Murray Citrus Growers' Co-operative Association was received advising that that Association would not support the formation of the Council without complementary provision for the collection of a levy as provided for in the draft constitution.

The President stated that he had conveyed the decision of the Board in regard to the levy, to the meeting in Melbourne and the statements made by the South Australian representative indicated that some such action would be taken by South Australia.

It was decided that a communication be addressed to the Federal Citrus Council, and a copy sent to the South Australian Association expressing regret on account of the failure to form the Australian Citrus Advisory Council and to intimate that the Federation has always been prepared to support some such proposal, but was only against the proposed method of raising finance by means of a levy.

Correspondence from the Department of Commerce was also received advising that in view of the lack of

unanimity regarding the proposed Council it does not appear possible at the present time to introduce legislation to establish the Council.

The President further reported having again submitted an offer that the Federation would do the secretarial work for a Federal body acceptable to the Federation. The President's action was endorsed.

The correspondence from the Federal Government which was received, advised that in respect to the resolution adopted at the last Board meeting, the Government gave an assurance that it would not legislate for the industry without consulting the growers' organisations.

It was decided to thank the Government for the expressed assurance.

Factory Prices for Citrus.

The President reported that this question, in relation to citrus, was also discussed at the meeting of the Federal Citrus Council, and agreement was reached in respect to prices for submission as recommendations to the Fruit Industry Sugar Concession Committee.

Grading Regulations—Citrus.

A proposal was under consideration to alter the grade designations from "Special," "Standard" and "Plain" to — "Extra Fancy," "Fancy" and "Choice," and for an expression of opinion as to the deletion of "Plain" grade from export.

It was decided to agree to delete "Plain" grade from export.

The question of the alteration of the grade names was deferred to be dealt with subsequently, but it was suggested that consideration be given to the entire deletion of the term "Plain." In view of the fact that "Special" and "Standard" had become so well-known, it was felt undesirable to make any alteration of the grade names for the domestic market. It was considered, however, that "Plain" is not a very desirable word, and that "Good" should be substituted.

1934 Citrus Export.

Having reference to the representations made to the Government as reported at the last meeting of the Board, the Prime Minister has now announced that the Government has decided to grant a retrospective bounty of 6d. per case on Oranges exported to the United Kingdom in 1934. The total quantity exported that year was 216,482 cases, the additional amount therefore to be paid to the industry by the Government being £5,413. Of the foregoing, 146,571 cases were shipped from N.S.W., which will represent an additional payment to the growers of this State by the Government of £3,664.

It was decided to request the Government to arrange the payment direct to growers.

1936 Export Season.

It was decided to make application to the Federal Government for an export bounty of 3/6 per case for the coming season.

New Zealand Embargo.

It was decided to arrange a deputation to wait on the Federal Government to make urgent representations for the lifting of the New Zealand embargo.

Mr. Mackenzie urged during the discussion for the very serious approach to this matter and suggested that a strong case should be submitted including the presentation of figures showing the movements of citrus fruit into Melbourne from other States over a period and also a statement showing the relative position of potatoes and citrus.

Mr. Mackenzie further advocated that greater publicity should be sought in newspapers generally, and that every opportunity should be taken to ensure that the Government is impressed with the seriousness of the position to this industry.

Apple and Pear Export Inspection.

The President reported that a meeting of the Executive of the N.S.W. Apple and Pear Export Association adopted the following resolution, and requested that it be conveyed to the Board:

"That this meeting asks the Federation to consider the advisability of sending a representative to Melbourne and Hobart at once to report on the manner of inspections, with particular reference to the amount of tolerance exercised in the administration of the regulations."

The President stated that the resolution was the outcome of a discussion, during which it had been suggested that inspections in this State were much more severe than in the

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other States, and it was considered that if definite information could be secured it would be of considerable assistance if any future approach to the Government.

It was decided to agree to the request contained in the resolution submitted by the Apple and Pear Export Association, and that Mr. E. Ray, of Bathurst, be appointed as the representative with Mr. A. E. Herring, of Batlow, as an alternate in the event of Mr. Ray not being able to go and that the Department of Agriculture be asked to also send an officer.

Codlin Moth.

The President reported also having received the following resolution from the N.S.W. Apple and Pear Export Association:

"That being concerned over the rapid increase of codlin moth in this State, which is making it very difficult, verging on the impossible, to export satisfactorily, due to the uncertainty as to whether growers will be able to fulfil their obligations, including space; we recommend that a conference should be held between the Department of Agriculture, and the Fruitgrowers' Federation and the Apple and Pear Council, to discuss the ways and means of co-operation to minimise the losses through codlin moth."

The Board also decided to adopt the above resolution and to request the Department of Agriculture to arrange a conference of the kind suggested.

Bunchy Top in Bananas.

Notice having been received that a special application would be submitted to the Board for endorsement of an application being made by the Banana Growers' Federation for a special grant of £500 from the Orchard Registration Fund to supplement a special fund used in connection with "bunchy top" control this question was considered.

The President reported having invited Mr. H. A. Stevenson, chairman of the Banana Marketing Board and president of the Banana Growers' Federation, to attend the meeting.

Mr. Stevenson addressed the Board and reviewed the position, more particularly since 1925, when the acreage under Bananas had been so much reduced owing to the ravages of "bunchy top." The growers, through

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NEW SOUTH WALES—(Continued).

the Banana Growers' Federation, had co-operated with the Department of Agriculture, both financially and otherwise, and a considerable sum of money had been found by the industry for this purpose. The particular application now under consideration was for a special grant to supplement a trust fund already in existence to be used for the eradication of infested plants on abandoned areas or such places which could not be effectively cleaned up, due to the inability to locate the owners or to the inability of the owners to do the actual work.

Mr. Stevenson also referred to the fact that the Banana Growers' Federation is still collecting from Banana growers in order to finance the expenses of certain inspectors in the area concerned and requested the Federation's co-operation in inducing the Government to take over the responsibility of financing inspections in full.

It was decided to recommend a special grant of £500 from the Orchard Registration Fund to supplement the particular fund referred to and to wait by deputation on the Government with the object of inducing the Government to take over the re-

sponsibility from the industry of financing inspection.

Street Barrows.

The Secretary reported that since the last meeting considerable activity had taken place in respect to the proposed removal by the transport authorities of the barrows, numbering eight located in George-street, between Hunter and Market streets.

The Secretary further reported that although notice had been given to the barrowmen concerned, some delay had been caused and the barrowmen had not yet vacated the stands.

Fruit Fly Parasites.

Mr. W. B. Gurney, Government Entomologist, attended at 11 a.m. on March 6, and informally addressed the Board in respect to his recent visit to India and Africa in an endeavor to secure "fruit fly" parasites as well as parasites for "white wax scale." A copy of a preliminary report furnished to the Government by Mr. Gurney, the contents of which formed the subject of his discussion with the Board, was circulated to each member.

Mr. Gurney gave an interesting review of the position and answered a number of questions submitted by several members.

It was decided that a letter of appreciation be forwarded to the Department of Agriculture for the attendance of Mr. Gurney and for his report, together with an expression of hope that success in securing effective parasites will result.

Granny Smith Memorial.

The President reported that the Committee previously appointed by the Board had made arrangements to visit Eastwood on March 7 to meet the local committee with the object of inspecting a suitable site for the erection of the memorial.

Prune Export Bounty.

The Secretary reported that the Government has announced its intention to grant assistance to Prune growers amount to 1d. per lb. on exports during the year 1935. It is estimated that the grant will total about £8,400.

The Government has further decided to assist 1936 exports at the rate of 1d. per lb., under which it is estimated that about £4,500 will be involved.

N.S.W. BANANAS.

Reduction of Planted Areas.

Bunchy Top Almost Under Control.

AFTER VISITING the Banana plantations of the North Coast of N.S.W., the State Director of Fruit Culture, Mr. C. G. Savage, stated that he found that where the Bananas had been established in suitable localities the plantations were in good heart, and high quality fruit was being harvested.

In unsuitable areas the plantations were being destroyed.

Though the area planted this season was less than that destroyed there was no justification for increased plantings, because of low prices for the fruit.

The outbreak of bunchy top in some of the Tweed areas was now being brought under control, and it was hoped that in the near future the position so far as disease was concerned would again be safe. Growers showing negligence, however, in combating the disease would be prosecuted.

N.S.W. SHOWS.

Luddenham: Fruit awards were—Black Muscat Grapes, C. W. Vicary; Lemons, common, Mrs. B. S. Ahearn; dessert Apples, C. W. Clink; baking Apples, Mrs. E. Handley; baking Pears, V. Earlam; Portugal Quinces, Mrs. E. Hughes; Common Oranges, H. Sales; Common Quinces, V. Earlam; Persimmons, Mrs. L. C. O'Meagher; Pomegranates, V. Earlam; Figs, C. W. Clink.

Lithgow: At the 16th annual show of the Rydal Agricultural Society on March 14, the principal prizes were won by Angus Buckley, as follow: Dessert Apples, Jonathans, Granny Smiths, Five Crowns, Rome Beauties, cooking Apples, dessert and cooking Pears, Clingstone Peaches, Dark Plums and collection and pyramid of fruits. Mr. R. B. Murray won with Nectarines, R. Rivett (Slipstone Peaches), Miss Middleton (Light Plums), and J. H. Hoe (Tomatoes).

VEGETABLE GROWERS' ASSOCIATION OF N.S.W.

A well-attended meeting of members of the N.S.W. Vegetable Growers' Association was held at Moss Vale on March 23. Mr. A. A. Watson, Director of State Marketing, gave particulars of vegetable marketing in Sydney.

The Secretary of the Sydney Market Gardeners' Association said that the 538 new stands were being provided at the Sydney markets for vegetables, and it was likely growers would secure their own stands.

N.S.W. FRUIT CROPS.

Apples : Pears : Peaches : Prunes :
Citrus : Bananas.

IN A REPORT received from the N.S.W. Dept. of Agriculture early in March, the following is stated: Droughty conditions adversely affected pome fruit crops at Kentucky; generally crops will be reduced by 25 per cent.

Favorable weather was experienced in the Orange district; fair to medium crops of Apples were being carried, while yields of Pears were good to heavy.

The pome fruit crop is very disappointing around Young; Prunes fairly light, the recent rains improved both quality and quantity. Rust, however, was much in evidence. There was a very heavy fall of D'Agens at Griffith; the sample of Prunes generally is only poor to medium.

Generally good to heavy pome fruit crops are reported from the Murrumbidgee Irrigation Area. There were very heavy crops of extra fine quality Phillips Cling, Golden Queens and Pullars Peaches.

Citrus: Prospective yields for the most part range from light to moderate. Fruit generally is said to be developing well, and it is anticipated satisfactory sizes will be obtained. Fairly good crops of Lemons are expected in some areas, but in others only light yields are likely. According to a review issued by the State Marketing Bureau on February 26, 1936, prospective yields of citrus in this State are as follow:—Oranges, 1,960,000; Mandarins, 410,000, and Lemons, 250,000 bushels.

Bananas: Although generally fair crops are in prospect there is likely to be a falling-off in marketings during March, chiefly owing to November fruit maturing earlier than usual.

Bunchy-top is said to be still prevalent and serious outbreaks have occurred on the Lower Tweed.

Medium crops are in view at Macksville. Some growers at Coffs Harbor say they will be cutting only once in three weeks.

FERTILISER SUBSIDY.

Extension of Time for Applications.

The Fruitgrowers' Federation of N.S.W. has received advice from the Dept. of Commerce that an extension of time has been agreed to for the lodgment of applications for the artificial manure subsidy in respect of artificial manure used during the year ended June 30, 1935, and the required legislation will be shortly introduced.

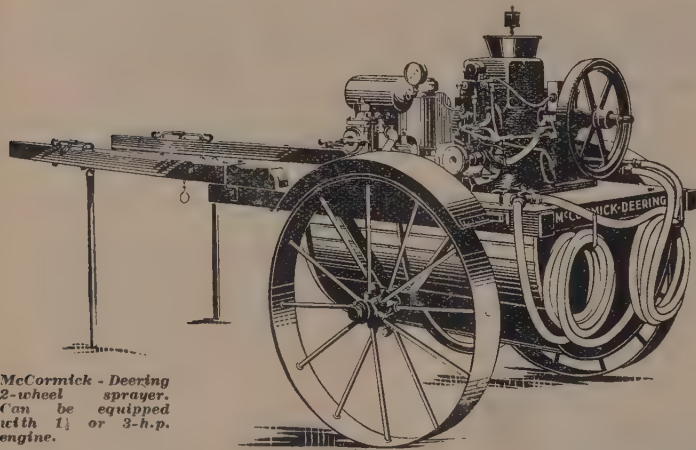
Those who have not yet lodged applications are urged to do so immediately.

All applications lodged after October 31, 1935, will be eligible for consideration as soon as the necessary legislation has been passed by Parliament.

Banana Marketing.

With the object of organising the marketing of Bananas in N.S.W., the State Banana Marketing Board is setting up a marketing committee to advise on market values. Minimum prices are to be set for fruit of fair average quality, no sales to be made below this minimum unless authorised by the Board's inspector.

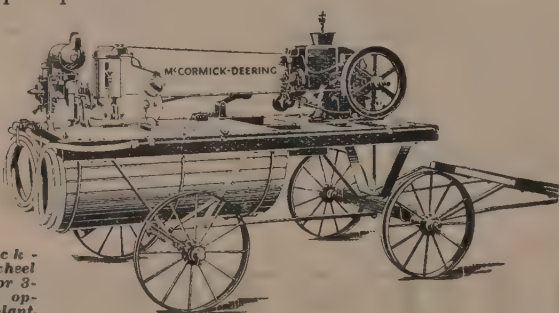
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engine.

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South Australia.

FIELD DAY AT BLACKWOOD ORCHARD :: BLACK SPOT TROUBLESOME
SPRAY RESIDUE REMOVAL :: ROOTSTOCKS, PRUNING, MANURING

THE ANNUAL FIELD DAY at the Blackwood Experiment Orchard on February 7, attracted an attendance of 120 interested people. The function was entirely successful, and appreciation was expressed regarding the practical tests which were being carried out and demonstrated.

Among those present were the Minister of Agriculture (Mr. Blesing), Mr. Playford, M.P., the private secretary to his Excellency the Governor (Mr. Leigh Winsler), the Chief Horticultural Instructor (Mr. A. G. Strickland), Mr. D. B. Adam, of the Waite Research Institute; Mr. N. H. Wicks (member of the Advisory Board of Agriculture), Mr. George Quinn (former Chief Horticultural Instructor), and Mr. Rodney Fowler, manager of the Blackwood Experiment Orchard.

Mr. Strickland said that black spot had been particularly troublesome this season. Apples showing any signs of this trouble would not be eligible for export.

Regarding spray residue, the British health authorities allowed .01 grains arsenical residue; therefore, no traces of this should be showing. The old method of hand-wiping was unsatisfactory, owing to the percentage of residue left in the calyx. Growers must concentrate their efforts on washing.

A 1 to 3 per cent. solution of hydrochloric acid should be used, and the fruit should be washed immediately after picking. Wooden troughs or vats could be used. The process consisted of placing the fruit in a suitable case, plunging this into the solution for about two minutes, transferring it to a draining board, and then plunging it into a fresh water bath. Special attention, however, had to be given to Cleopatras, as if they were plunged deeper than six inches the solution entered the calyx tubes and set up mouldy core. The cost of the process was approximately 1d. per case. A demonstration was given by the manager of the orchard (Mr. R. Fowler) and assistants.

Mr. D. B. Adam stated that progress had been made in connection with the control of gummosis of Apricot trees. The principal feature of the disease was gumming of the branches wilting of the leaves, and subsequently the death of the limb. The disease was caused by a fungus in the wood or bark of the tree.

Mr. Fowler said that more than 200 types of inoculation are being tried in the orchard. The best control measure, so far, is the cutting off of the diseased limbs.

Leaflets were distributed to visitors dealing with rootstocks of Cherry, Pear and Peach trees, and regarding manures for Apple, Pear and Peach trees.

South Australian Fruit Marketing Association Inc.

The monthly meeting of the executive of the S.A.F.M.A. was held at Adelaide on February 28, 1936.

There were present Messrs. H. J. Bishop (President), H. N. Wicks, J. B. Randell, F. F. Redden, M. G. Basey, J. S. Hammat, S. M. James, H. J. Bishop, M. Vickers, and A. O. Petersen, A. G. Strickland, E. S. Mason and the secretary.

Finance.

Financial statement showing balance in bank £820/8/11, was submitted by the secretary and received. Accounts passed for payment, as per list, £35/18/8.

Correspondence.

Letter from Department of Agriculture enclosing copy of report by Mr. Spafford on his recent trip to New Zealand, South America and South Africa.

Letters from Australian Apple and Pear Export Council re trade with Canada, finance for London delegates' expenses and trade with Manchester.

Letter from Department of Commerce dated February 7, advising that the Commonwealth grant to Apple and Pear growers would be distributed to the States in proportion to their respective share in exports during 1934-35 season. It was resolved the secretary write, asking that consideration be given to including an additional 50,000 cases in South Australia's share, being fruit damaged by hail, which in consequence could not be exported, and pointing out that the original grant was to have been on the basis of a reduction in freight, but was subsequently varied owing to damage by hail in Northern Tasmania.

Annual reports from Deputy Chief Horticultural Instructor and Government Produce Department were received.

Field Day.

It was resolved to record a vote of appreciation to Mr. F. F. Redden for

allowing the field day to be held at his property. The president stated that a most enjoyable day was spent, and the arrangements made were excellent.

Freight Position.

The president reported on the freight position, and gave a survey of the methods that had been adopted during the past season. He considered that they were on the right track, but it would be necessary next season to make an earlier start and endeavour to arrive at a better basis for closer co-operation between the S.A.F.M.A. and O.S.R.A.

The February shipments of Apples would be between eighty and ninety thousand cases, which was easily a record shipment for South Australia in February, and was due to the unprecedentedly early season.

Levies.

It was resolved that the levy for the present season be fixed on the same basis as the previous year, namely 1d. per case, payable half by the shipper and half by the grower.

Fruit Packers.

In reply to a question by Mr. A. O. Petersen, it was stated that the usual



Officials and visitors to the Annual Field Day at the Blackwood Experimental Orchard, South Australia.

Rootstocks for Pear Trees

Tests Over 25 Years at Blackwood, South Australia

QUINCE STOCK NOT SATISFACTORY ON QUICKLY
DRYING CLAY LOAMS ON HILL SLOPES.

AMONG THE MANY interesting matters discussed at the recent Field Day at the Blackwood (Sth. Aust.) experiment orchard was that of rootstocks for Pear trees.

Particulars, supplied by Mr. Geo. Quinn, formerly Chief Horticultural Instructor, were as follows:—

The Pear rootstock trials were started in 1909 with the object of comparing the behaviour of Pear seedlings and Anger's Quince, raised vegetatively as rootstocks for four varieties of Pear, viz:—Glou Morceau, Beurre Diel, Beurre Easter and Vicar of Winkfield.

Three trees of each variety were budded on to each stock, and these were planted 20 feet apart on land that possesses a surface loam, very shallow and poor, both in texture and richness. The subsoil is clay or marl for two or three feet, which should not offer too great a resistance to penetration by Pear seedling roots, but would be calculated to repel the more naturally shallow penetrating Quince roots. The land slopes slightly, and the Quince stocks were given any advantage that might result from the lower position on the slope.

For the first six years all the trees made healthy growth, except those of Beurre Easter on Quince, and one Vicar of Winkfield on the same stock. After this year the other trees on Quince began to slacken off in growth, somewhat and came into fruit.

All the trees on Pear seedlings continued to grow vigorously, but started fruiting only very shortly after those on Quince.

Growth measurements were made in 1934, when the trees were 25 years. In all these, the trees on Quince were distinctly smaller, but the discrepancy in size was very much more marked in the varieties Beurre Easter and Vicar of Winkfield than in the other two.

Records of yield and quality of fruit have been kept throughout the period. Trees of Glou Morceau on both stocks started fruiting in 1917, but those on Quince led in aggregate production for 11 years. Beurre Diel on Quince started cropping in 1916, and on Pear seedling, sparingly in 1917. The former led in aggregate yield for 16 years. Beurre Easter, on the other hand, did not crop on Quince till 1920, three years later than on Pear stock, and produced so few fruits on Quince throughout the period that it might be said to have failed altogether. Vicar of Winkfield on Quince fruited in 1916, and on Pear three years later, but the latter rapidly outstripped the trees on Quince.

rule was that the packer was not paid if the fruit packed was not passed on inspection.

1935 Pears.

Mr. Strickland read a confidential report on shipment of 1935 Pears. On behalf of members the president expressed his appreciation of the information given in the report.

Research Sub-Committee.

Mr. H. N. Wicks reported that at the Research Sub-Committee meeting a discussion took place in regard to various sprays, also on the relative merits of powder and paste, and he mentioned that recent American bulletins generally condemned the use of spreaders.

The position re using smudge fires as a deterrent for Rutherglen bug was to be considered by the Parliamentary draftsman with a view to amending the Bush Fires Act and to enable smudging to be done, provided proper precautions are taken.

Mr. Strickland has consented to give an address on "Black Spot Control" in July next.

Mr. Basey and Mr. Wicks reported that they could see very definite results where the sulphate of ammonia experiments had been carried out, and they considered the theory that sulphate of ammonia did not have a long life appeared to be wrong; apparently sulphate does not leach out quickly.

◀ FRUIT TREES ▶ Of Outstanding Quality

True to name, healthy and well-rooted. Citrus trees in large quantity — Budding Wood supplied by the Bud Selection Society of N.S.W. — Worked on LEMON, SWEET ORANGE, and TRIFOLIATA Stock.

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SOUTH AUSTRALIA—(Continued).

It should be noted, however, that the records are based on total yields of all the trees, and that one of the Vicar of Winkfield trees on Quince died in the ninth year of cropping. One of the Beurre Easter trees on Quince also died in 1925, but the discrepancy was already so great that it could not have altered the position appreciably. Thus, in total yield up to 25 years no variety on Quince did so well as on Pear, and two may be said to have shown no advantage in the first ten years. There was a tendency at first for the fruits from trees on Quince, with the exception of Beurre Easter, to be superior in quality, but after a few years, the positions were reversed. Thus, after 25 years for all four varieties, the percentage of first-grade fruit from trees on Pear was 67.55, and on Quince 52.48.

At present, all the trees on Pear, except two Vicar of Winkfield, remain healthy, whilst those on Quince have ceased to develop, or are showing signs of declining. It would seem, therefore, on quickly drying clay loams on hill slopes, the Quince stock should be avoided.

There were also discussions with reference to pruning.

MID-MURRAY NOTES.

Rain Damage to Currants and Sultanas at Renmark ::
Effects of Trellising, Summer Treatment and
Manuring :: Green Manuring and Water Table ::
Importance of Leaves for Subsequent Bud Develop-
ment :: Drainage Problems :: Fruit-growing at Clare.

(By Our Special Correspondent.)

THE FRUIT SEASON has been very disappointing here this year. The Currant crop suffered severe rain damage, and just when Sultanas were ready to pick, another rain storm appeared, which caused a good deal of mould to develop, which will both affect the quantity and quality of the finished dried article. Those who were fortunate enough in having had fruit of a high Baumé list before the rain came, and were able to start harvesting operations early, obtained a high-grade light colored fruit, which is much sought after by the United Kingdom market; but, immediately the rain-

damaged berries appeared among the golden fruit, high quality became scarce.

One characteristic feature about all the rains we have had during the ripening stages of the Grapes, is that of each rain being followed by many days of humid conditions; whereas in a normal season a day's rain is usually followed by a cool southerly breeze, which quickly dries both vines and fruit, and little damage follows, but this being an exceptional year we must take it and grin.

It is in a year such as the present one when we are obliged to revise our ideas of what constitutes a proper

trellis for Currants and Sultanas, and what constitutes proper summer treatment to meet exceptional weather conditions. There is little doubt that rain damage has been heaviest where excessive foliage has been allowed to develop. This applies both to Currants and Sultanas, and in the event of wires becoming slack the fruit cannot get a sufficient circulation of air to prevent mould developing, these two causes accounting for a great deal of trouble.

Keep the Currant trellises high and wires tight, spurs well spaced, to prevent undue massing of bunches, and do not allow an overbalanced leaf area if you will wish to minimise rain damage in future.

With Sultanas foliage should be kept in check by

the tipping method of growth control, and foliage wires provided, to enable a circulation of air to pass through the vine whenever possible.

There is yet another factor which has to be considered, which has made itself manifest this year, and that is the

proper balance of manures

used on the vines. It has long been recognised that nitrogen is the dominating influence in vine production. This being so, the use of nitrogenous fertilisers have been used freely by some growers with little regard to an adequate balance of plant foods, consequently, although production has increased, the fruit produced in this way is more subject to rain damage than when the nitrogen factor is sufficiently balanced with phosphoric acid dressings. Whether nitrogen is applied in an artificial form or whether it is obtained from the growing of leguminous cover crops, it should be balanced by an amount of phosphoric acid equivalent to about 4 cwt. per acre for every ton of dried fruit harvested.

A special irrigation is now in progress for the purpose of giving growers an opportunity of sowing cover crops and plants, and is being freely availed of.

The growing of leguminous crops is now a routine field practice with almost every grower, and, while recognising the value of such a practice, it has brought about certain undesirable reactions on some types of soil, in so far as in many cases over-watering has occurred, and a rise in the water table over and above the capacity of the legume to absorb has taken place.

Although Tick Beans give us the greatest bulk of green material when ploughed under, they require more water to sustain regular growth than Cow Peas. In some seasons it is possible to grow a satisfactory crop of Peas on one irrigation, but it is seldom possible to do so with Beans. The ideal plant as a cover crop should be a hardy winter-growing legume, which would give a satisfactory cover crop on one irrigation. But we have not yet succeeded in finding the ideal plant.

In an irrigation community, where water rates are necessarily high, every acre of land is expected to produce the maximum amount of return. In consequence of this, few fodder crops are grown, but the exceptions are in cases where fodder crops are grown for the purpose of taking up surplus soil water, and where vines have died out and Lucerne planted before replanting with vines. Naturally, our horse feed constitutes quite a considerable item in the course of a year's operations.

In past years it was the ill-advised custom to allow horses a free run of the land as soon as the Grapes were picked, and they did well on it. Later, experience, however, proved that this custom had a very weakening effect

??? ??? ???
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Account Sales rendered are the best test
of Salesmanship. On that test we have
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Tasmanian Growers ship through Eric E. Burgess, 88 Collins Street, Hobart.

Victorian Growers ship through Fred J. Andrew, 153 William Street, Melbourne.

MID-MURRAY NOTES—(Continued).

on the vines, and in most cases the practice was discontinued, but there are still some short-sighted growers who allow the horses to fatten on vine leaves. If they would only consider the botanical significance of the function of the leaves they would find that it was very dear horse feed.

At this time of the year, after the fruit is picked, the leaves are busy helping in the manufacture of the carbohydrates or starch-forming substances which give effect to the maturation of fruitful buds. In the process of bud formation,

if the vine is deprived of leaves prematurely there will be a certain check to the evolution of buds that may cause a potential fruitful bud to stop short and become a tendril instead of a bunch formation, and a bunch bud may be deprived of becoming a strong double-headed bunch and remain in a weakened condition until the following spring, when it will be noticed that bunches are small. Nothing must be done to prevent the natural leaf fall, otherwise the crops will undoubtedly suffer.

A great deal of interest has been centred around the

problem of drainage

in recent months, and the main reason for this is the harmful effects shown on many orchards when a monsoonal disturbance, bringing 4½ inches of rain, visited us in January. Such a rain following the usual seasonal irrigations, brought certain injurious salts to the surface, in such a way that growers were forced to take a more active interest in drainage matters. Consequently, the Irrigation Trust is conferring with Government Departments and the C.S.I.R. with a view to creating a scheme which will benefit those affected.

The area comprising Block E has been more affected than in other parts of the settlement, and owing to its low locality is believed to be affected by the advent of the locking system of the river. Block E comprises one of the most highly productive portions of Renmark, and the formation of this area points to silt deposits having been carried down by the river over a period of thousands of years. This seems to be borne out by a formation of river sand at a fairly common depth. The natural drainage of this area being through this sand strata back to the river, has been held up to a certain extent by the lock level being at such a height so as to prevent this occurring. The lowering of the lock level is filled with departmental and other difficulties, but, with the test holes put down by the officers of the C.S.I.R., it will soon be possible to definitely say whether the pool level is responsible for the high water table at Block E or not.

A recent visit to Clare, one of South Australia's non-irrigated fruit-growing areas, brought to light many interesting comparisons between growing Currants under irrigation and non-irrigation conditions.

Fruitgrowing at Clare.

Clare is situated about 80 odd miles north of Adelaide, and comprises one of the most picturesque portions of the State, where hillsides and river flats are under vines and fruit trees. The countryside is reminiscent of Harcourt (Victoria) in its tree-lined roads.

Victorian News and Notes

Mornington Peninsula: There was a glorious rain in mid-March which gave the ground a good soaking and relieved the anxiety of producers, many of whom had found it necessary to cart water.

The Apple harvest is moderately satisfactory, though many of the Jonathans lack color owing to shortage of rain.

Prior to the rain, many fruitgrowers had to fight bushfires. Fire threatened the property of Mr. W. Jarman, of Red Hill. The spraying outfit was used successfully in fire fighting.

A highly-colored sport which developed some years ago on a Jonathan tree is under observation.

:: :: ::

Tyabb: Mr. Geoffrey W. Brown, President Victorian Fruit Marketing Association, and delegate from the Australian Apple and Pear Export Council to the Empire Fruit Conference, addressed a meeting here on March 20. Major Wilson presided. Mr. Brown said that production was not real wealth unless it had marketable value: we must send to export markets the varieties and quality and quantity needed. The division of the British markets among Empire countries, as projected at the 1934 Empire Fruit Conference was of great importance to all, including the British Apple grower.

By dealing with Empire Apple supplies on a co-ordinated basis, the Continental market could be developed in a far more constructive way than by each country sending without

the knowledge of what the other Empire partner was doing. America now offered continuity of supplies—even into our season, with Winesaps—which were not to be compared with fresh fruit from the Dominions. But a co-ordinated programme was necessary between the Dominions to ensure continuity of supply of the varieties desired.

Continuing, Mr. Brown said the need existed for an Empire Fruit Council, embracing fresh, canned and dried fruits, and including Jamaican Bananas for one class of fruit reacted on the other. Each such section must, however, be autonomous, and the combined council could act in an advisory capacity.

In conclusion, Mr. Brown said all too few realised the magnificent work which was being performed by Mr. Bruce, the Australian High Commissioner in London.

The chairman said the meeting desired to endorse the policy outlined by Mr. Brown, and a resolution to this

EARLY COLORING JONATHAN SPORT.

The early coloring Jonathan sport at the orchard of Mr. H. Chandler, at Bayswater, Vic., has again shown up prominently this year.

Quite early in the season and before the standard Jonathan has turned color, this sport is already highly colored. Later on in the season the blush covers the whole of the fruit to a deep rich red presenting a most attractive appearance.

In all respects this highly-colored sport has the true Jonathan characteristics.

Trees are being worked over to this new strain, and Mr. Chandler is in receipt of requests from several districts for buds and scions.

There should be good commercial possibilities for this valuable sport.



Beure Bosc Pear Trees at the orchard of Mr. R. G. White, E. Doncaster, Vic.

effect and conveying a vote of thanks was proposed by Mr. W. P. Hutchinson, seconded by Mr. G. H. Sprague, and carried with applause.

Harcourt: Despite all seasonal difficulties, there is a lot of beautiful fruit in Harcourt this season.

Fruit is being steadily placed in cool store, while the export figures are mounting.

During February the quantities for export from Harcourt were Apples 3,442 cases, Pears 2,119 cases. Up to March 20 the figures for that month were: Apples 12,864 cases, Pears 16,232 cases, making combined total of 21,306 cases Apples and 18,351 cases pears: there were also sent just over 1,000 ½ cases of Plums—a grand total of 40,659 packages.

There was a strike at the Harcourt Cool Stores at the end of March: three men demanded extra pay, and as it was not forthcoming, they ceased work. The seasonal work, however, was not seriously affected as local growers quickly filled the vacant places at the packing benches.

The decision of the Federal Government to provide money for research work is generally appreciated as the losses caused through pests and diseases are serious.

Bacchus Marsh: Early maturity was a feature of the Apple crops this season: quality excellent, though color sometimes lacking because of absence of rain. Up to mid-March the principal Apple varieties sent forward were Jonathan and Dunns. Consignments include: 12,000 cases for export purposes; 2,000 cases to cool stores; 1,600 to Ballarat; while several hundred cases have been sent to interstate destinations.

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A Good Cover Crop

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Sowing with

Sulphate of Ammonia

in addition to SUPER

Ask for

1 & 1 or 2 & 1 Super & Ammonia

SULPHATE of AMMONIA
is INDISPENSABLE in a
WELL-KEPT ORCHARD

H1 3c

VICTORIAN NEWS & NOTES. (Continued.)

Nevertheless there is a feeling of regret in many quarters that the £20,000 should have been deducted from the £100,000 grant which was deemed to be in lieu of freight reduction.

HEAVY PEAR YIELDS.

IN A REPORT received from the Victorian Department of Agriculture early in March, it was stated that the Pear crop was heavier than was first anticipated. In the chief pear districts of the Goulburn Valley, Doncaster, Harcourt, and the Mornington Peninsula, excellent crops were harvested. Where spraying was efficiently carried out there was very little loss either from black or from codlin moth.

In the Shepparton district the Williams Pear crop was a record and Packhams almost a record.

Despite seasonal difficulties, good Apple crops were harvested. Hail storms did considerable harm at Harcourt. The long dry spell reduced crops generally, and Jonathans especially in Gippsland did not color freely. Apples cropped well at Portland.

The Peach crop is generally a good one, particularly in the Goulburn Valley, where there is an excellent crop of Pullars Cling.

Diamond Creek.

One of the most comprehensive displays of fruit seen in this district for many years was on view at the 52nd annual show of the Diamond Creek Horticultural Society on March 14. The show was opened by Hon. W. H. Everard, M.L.A., Speaker of the State House.

Messrs. Wadeson Bros. won 1st and 2nd prize and the Henry Williams cup in the championship class for best six varieties of Apples and three of Pears. The varieties included first-class specimens of Jonathan, Granny Smith, Stewarts, Londons, Moreland Queen and Delicious Apples: the Pears were Williams, Packhams and Bosc. J. Cowan was third.

For Apples packed for export, Mr. H. G. Adams, of Hume Vale, was first (winning the Gerrard special trophy) with R. Greenwood, Hurstbridge, a close second. The tray and culinary classes were well represented.

PLANTING OF PASSION-FRUIT.

During certain brief periods in the past year prices for Passion-fruit were distinctly greater than for very many years, and the effect of this will be to greatly stimulate planting. Unless locations are exceptionally mild and favorable for present planting, the operation should be deferred until October or November, state officers of the Fruit Branch of the Department of Agriculture. Where Passions have been planted in the summer and are backward in development, increased attention is desirable to ensure their training on the trellis being completed before winter. A light application of soluble nitrogen and careful hoeing well around the plants is necessary to attain this end.

The Harcourt-Young Orchardists' Club is actively at work. District statistics have been prepared showing the contribution of the fruit industry to the national wealth.

It is stated that in three years £108,000 has been paid in shipping freights; £48,000 in preparing and packing the fruit for export; spraying material cost £21,000.

The average return to the growers is estimated at 3/6 per case, which is deemed to be insufficient to meet working costs, thus growers are drawing on their capital.

The club is urging more intensive research work to improve cultural methods. The problem of biennial cropping is deemed to be a matter of urgency, as district crops vary from 700,000 cases to 250,000 cases.

WESTERN AUSTRALIAN FRUIT GROWERS' ASSOCIATION.

Successful Citrus Advertising Campaign.

At a recent meeting of the northern districts council of the Western Australian Fruit Growers' Association, a report was presented by the Citrus Week Publicity Campaign. The report, which is signed by Mr. J. C. Holland, Hon. Secretary, refers to citrus advertising campaign conducted in Perth from October 16 to 23, 1935.

The co-operation of the leading newspapers as well as the National Broadcasting Commission, was readily secured, and from that commencement the publicity committee developed interviews with prominent citizens, press articles, talks over the air, etc.

It is evident from the report that much valuable publicity was effectively launched. In conclusion, the Secretary stated that, while difficult to estimate the value of the campaign, undoubtedly great public interest was created, and if a more extensive scheme were launched in the early stages of the coming season the public would certainly become "citrus minded" and at least some of the difficulties which confront growers during winter months would to a great extent be obviated.

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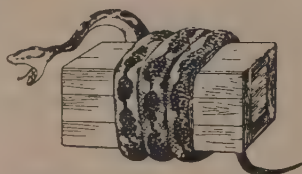
Bridgetown: There was much enthusiasm among the 200 people who attended when Mr. W. P. Scott laid the foundation stone of the new Bridgetown District Hall.

The Apple harvest is abundant and clean. Much fruit has already gone forward for export.

:: :: :: ::

Around Donnybrook and the Preston Valley the Apple crop is described as one of the best on record. The Jonathans were of exceptional quality.

PYTHON



Latest Electric Machine Mounted as a Complete Mobile Unit

EFFICIENCY The machine is automatic, giving a uniformity of tension with every wire straight around the case: thus each wire carries an equal proportion of the load. No loose wires irrespective of the operators.

SPEED ——— Ties from 400 to 600 wires per hour.

ECONOMY The low cost of wire. The small off-cut or waste of wire, which is 1 3/4 inches and which cannot be varied however loosely the wire is placed round the case.

The complete unit will be leased at a low annual rental which embodies service and maintenance, with no tags as to the purchase of wire.

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South Australian Agents: GOLLIN & CO. PTY. LTD., 110 North Terrace, Adelaide.

TASMANIA

Orchard News and Notes

Dry Weather Reduces Crops—Disease and Pest Control—Increasing Use of Canadian Type Case -- Fruit Packing Instruction.

(By P. H. Thomas, Chief Horticulturist, Tas. Dept. of Agriculture.)

A SUMMARY of information received by the Tasmanian Chief Horticulturist (Mr. P. H. Thomas) from the District Orchard Inspectors, together with other information relative to fruit culture, is as follows:—

Weather and Crops.

Continued dry weather throughout the past months has led to much controversy in regard to possible reductions in crops. Early and mid-season varieties, as usual, came fairly well up to size, but later varieties, such as Sturmer and Democrats, are already losing a proportion of their leaves in orchards situated on northern slopes or banks. Jonathan, too, has suffered severely in certain areas.

Growers who installed irrigation during the dry season of 1934 will benefit this season, provided the applications have been fairly continuous and the soil at no time allowed to become too dry.

At the present time more than an inch of rain would probably be necessary to produce any appreciable effect on crops, but, whilst size might be improved thereby, the effect on keeping qualities is uncertain should rains be excessive.

Rainfall figures are appended and show a precipitation well below normal practically throughout fruitgrowing districts. At Franklin, 81 points were recorded as opposed to an average of 196; Hobart 28 compared with 151; Launceston 43 as compared with 121.

Pest and Disease Control.

Reference to the report for the same period last year shows that the estimated reduction of crops through spot alone in several of the main Apple areas was in the vicinity of 20 per cent. Black spot, though not so generally troublesome this year, is, nevertheless, serious in scattered

areas around Cygnet and Geeveston, and throughout Bagdad.

Codlin moth is, however, particularly prevalent everywhere, and together with the light brown Apple moth will be responsible for the elimination from export of a large quantity of fruit.

Red spider has continued to multiply rapidly, and some very heavy infestations have been seen which will necessitate attention during the dormant season.

The "Canary fly" is again troublesome in parts of the Derwent Valley and around Hobart.

Picking and Packing.

Fruit has not been coloring up as rapidly as desirable, and a number of growers have resorted to summer pruning to expedite this process. Unfortunately, fruits which have been previously sheltered from the direct rays of the sun by leaves and twigs are very susceptible to sun scald, and much loss has been sustained where hot summer days followed immediately upon this pruning.

The increased use of the Canadian type Apple case

should be mentioned here, and Inspectors find their time fully occupied in demonstrating and explaining the recommended packs for this container. Any growers having difficulty with their packing should communicate with the Department of Agriculture, or directly with the Inspector situated in their particular district. By this means it is hoped to reduce contraventions connected directly with packing and prevent complaints from the other end.

Arrangements are now being made for school packing classes, and those districts desiring these to be conducted should make application to the Education Department through their local Parents' Association.

Hobart, 18/3/36.

STATE FRUIT BOARD.

OWING to the long dry spell, the Apple harvest was lighter than at first anticipated — the crop is now estimated at about 60 per cent. of normal. Up to March 21, with the departure of "Ceramic," the export totals were Apples 508,439 cases, Pears 43,450; the totals for the corresponding period last year were 526,804 cases of Apples and 42,401 cases Pears.

State Fruit Board.

At a recent meeting of the State Fruit Board (Mr. C. O. Smith presiding), it was reported that the orchard tax so far had yielded £450, about 800 growers having paid their fees. When the additional 1,700 growers have paid the orchard tax there would be additional revenue of £1,000.

Representative in England.

The Board has appointed Mr. T. J. McKinley, a Hobart shipping agent, to be its representative in the United Kingdom. The salary is £500 a year, plus travelling expenses, in Australian currency.

Mr. McKinley, who was elected a warden of the Hobart Marine Board

in 1934, has been associated with fruit shipping for the past 25 years: he has travelled widely throughout United Kingdom, the Continent, South America, China, Japan and the Near East, having investigated marketing conditions in those countries. Mr. McKinley is to take up his duties as soon as possible.

When the appointment was under discussion at the Board meeting, Mr. R. H. Thompson stated that the action of the Board carried no reflection on the ability of Mr. L. F. Smeeton, Tasmanian Trade Commissioner, but rather that Mr. McKinley, with his wide knowledge of Tasmanian conditions, would be of assistance to Mr. Smeeton.

Apple Export Regulations.

Mr. Taylor stated that an error had occurred in the chart for overseas Apple export standards in that it conveyed the impression that it was permissible to ship oversizes of Cleos., Dunns, Grannies and Sturmers to Continental ports via United Kingdom.

It was further decided to notify that the Prince Alfred Apple should not be classed as a colored variety.

Interstate Trade.

With reference to shipments to Sydney, Mr. L. J. Jenkins, chairman of the N.S.W. Chamber of the Fruit and Vegetables Industries, addressed the Board, stating that the Chamber was now stronger than at any time since its inception: an endeavor was being made to secure new wharves for the landing of Tasmanian fruit in Sydney. He requested that the panel of selected agents in Sydney for handling Tasmanian fruit be enlarged to include all members of the Chamber.

After discussion, Mr. L. Taylor moved:

"That the members of the N.S.W. Chamber of Fruit and Vegetable Industries be accepted as salesmen for Tasmanian fruit."

The resolution was agreed to.

Trade With Brisbane.

The Associated Selected Agents of Brisbane wrote stating that the market prospects appeared favorable for better prices this year than those of last year. Proposals were made for better co-operation between the two bodies.

It was decided by resolution to give official recognition to the Brisbane Associated Selected Agents, and also to state that the Board intended to revise the panel in the near future.

Wharf Officers.

Mr. C. H. Burcham has been appointed Wharf Officer at Hobart, and Mr. C. S. Harris at Beauty Point.

Handling on Railways.

Mr. J. R. Abel said that open trucks and trucks which had been used for coal, wood, and manure, were supplied by the Railways Department to convey fruit for export.

Mr. T. Burnaby, in support, said that there were high temperature and sweating troubles with much of the fruit now carried by rail. Closed trucks with slatted ends were needed: he had witnessed much unnecessary rough handling caused by lack of railway connection with the Queen's Pier.

It was decided by resolution to request the railways to supply covered trucks for fruits and that the Department instruct its employees that cases of fruit could be loaded on their sides.

Activity at Huonville, Tas.

Manufacturing Fruit Cases.

Considerable progress has been made in the manufacture of cases by the Tasmanian Standard Case Co. at Huonville. The output is over 10,000 per day, 140 men being employed. The managing director (Mr. C. H. Tutton), who recently returned from abroad, stated that the demand for the cases had been so great that men were working in shifts. Mr. Tutton stated that new machinery was being installed, preference being given first to Australian and then to British machinery.

Dictators Thrive on Fruit.

Daniel Was a Vegetarian, Too.

If you want to be a dictator, or a marathon runner at 65 years of age, or smart enough to diddle a bunch of hungry lions of their supper, remember the simple diet!

Herr Hitler is practically a vegetarian. At a banquet tendered to him by Mussolini, he ate only a double portion of scrambled eggs. He neither drinks nor smokes.

Signor Mussolini is aged 52, and he is in wonderful health. Yet before he was leader of the nation he had severe stomach troubles. Then he commenced the simple diet. Pointing to a basket of fruit, he said to a recent interviewer: "That is the secret of my health—fruit, fruit, fruit! In the morning I have a cup of coffee and fruit; at lunch a bowl of soup and fruit, and at night fruit only. I never touch meat, but sometimes have a little fish."

Plain Mister Gibson, the marathon runner, whose photo. we published last issue, is in his 70th year, and he runs 6 to 10 miles each day. He lives on fruit, salads, nuts and simple diet of brown bread and honey.

Now we come to think of it, Daniel, whose deeds are enshrined in Scripture, lived on plain vegetarian foods, and would not touch meat. And he was more than a match for the lions!

There's some good "copy" here when we come to our fruit advertising campaign.

When, oh when, will that campaign commence?

WORLD'S LARGEST APRICOT ORCHARD.

What is claimed to be the world's largest single Apricot orchard is located in the Golden Valley, South Africa. Last season a record crop was harvested, and it required a small army of natives to pick and prepare the fruit. One thousand five hundred men and 2,500 women and children had to be recruited from villages as far away as 150 miles.

In addition to these, there were large numbers of university students, holiday-makers and others engaged during the six weeks it took to harvest the fruit. Practically the whole of the crop was dried, although some selected fresh fruit was shipped to London, where there is always a good demand for really good Apricots.

PATENTS
GEORGE A. UREN
PATENT ATTORNEY
HEATHY HOUSE, 499 LITTLE COLLINS ST.
MELBOURNE.



Plant APPLES This Season

Goodman's offer unrivalled values in Reliable Trees, worked on Northern Spy blight-proof stocks, also Root Grafted. All varieties, including:—CLEOPATRA, DELICIOUS, DUNN'S, GRAVENSTEIN, GRANNY SMITH, JONATHAN, LALLA, TASMA, YATES.

Splendid stocks also in all other Fruit Trees

Expert packing and prompt despatch any distance. ORDER NOW. Catalogue post free on request.

C. J. GOODMAN, Picnic Point Nurseries, Bairnsdale, Victoria.

Apple Breeding and Pollination

SEEKING A RED VARIETY WITH GRANNY SMITH AS ONE PARENT — POLLINATORS FOR GRANNY SMITH — TRANSMISSIONS OF VEGETATIVE VIGOR — INFLUENCE OF SCION ON STOCK — ROME BEAUTY SPORTS.

(By H. Wenzholz, Director Plant Breeding, N.S.W. Department of Agriculture.)

AN INCREASING NUMBER of Apple seedlings of controlled parentage are now reaching the fruiting stage at both Bathurst and Glen Innes (N.S.W.) experiment farms.

Unfortunately, hail at both centres interfered with observations on fruiting character, but one or two seedlings appeared to have fruit of good type, and these will be further observed.

The preliminary observations have indicated the possibilities of finding, amongst such crosses as Granny Smith with Tasma, Delicious and Rome Beauty, a late red variety which may, in addition, be an improvement in shape on the flat shape but good eating and keeping quality of the variety Tasma.

Mildew resistance is also carried in such parents as Tasma, Dunns and Delicious, and considerable variations exist in different populations and in different seedlings within the same cross with respect to this character.

During the past season the severity of mildew attack in the nursery rows at Narara permitted very heavy culling in some crosses, such as Granny Smith-Cleopatra and Granny Smith-Salome. Moreover since the planted out seedlings are not sprayed to control mildew at Bathurst and Glen Innes, the severity of the attack in most years facilitates selection for resistance to this disease.

Observations on the relative vigor of the different parental combinations continues to indicate that certain parents tend to transmit vegetative vigor to a high degree. Even amongst the 4,000 seedlings raised during the year in nursery rows at Narara, considerable differences in vigor and root system were again recorded by Mr. F. T. Bowman, Research Officer of the Fruit Branch, who is co-operating in this work. Certain crosses appear to throw all

deep-rooting seedlings, whilst in others, varying proportions of surface rooting and deep-rooting types occur. The three years' results on the inheritance of root type, which are at present being analysed, are expected to be of some value.

Some varieties, the progeny of which throw a high proportion of deep rooting types and other varieties the seedlings of which are predominantly surface rooting, were, during the previous season, budded on to various stocks. After one season's growth, however, Mr. Bowman reports that there was no apparent influence of the scion on the type of root growth of the various stocks, but that observations will be continued on the possible influence of the scions on the root system of the stock.

During the year approximately 2,000 seedlings of known parentage have been planted out at Glen Innes and Bathurst experiment farms, of which the majority have Granny Smith as one parent and a red variety as the other parent. It is now felt that the populations of most crosses are sufficiently large to indicate the value of the varieties chiefly used as parents, and crossing work between these varieties will now be curtailed until the behaviour of the thousands of seedlings on hand has been more closely studied.

Interpollination investigations

were continued at Bathurst, but not Glen Innes, Experiment Farm during the year, results generally serving to confirm those previously obtained.

Pollination for Granny Smith.

At Bathurst, over the four years 1930 to 1933, Statesman has failed to pollinate Granny Smith, and pollination during the past season gave only 3.4 per cent. set where Granny was used as the female parent, and 2 per cent. when its pollen was used on

Statesman. Observations made by Mr. Bowman at Young have, however, indicated that commercial areas planted solely to these two varieties produce fairly satisfactory crops, while Granny Smith, in the absence of a polliniser, produced no fruit. Even where the two varieties have been interplanted, however, the fruit set was found to be very low in seed content, indicating a lack of true fertility and a degree of incompatibility between the two varieties. Such poorly seeded fruit is very likely to be inferior in size and to drop before maturity—an occurrence which has actually been observed to take place in these orchards. Moreover, in seasons unfavorable to pollination low sets of fruit are obtained where such pollination takes place between such partly incompatible varieties.

In addition to Statesman, Dunns has also previously been shown to be deficient as a pollen parent for Granny Smith, both at Bathurst and Glen Innes. Interplanting of Granny Smith with other varieties, such as Delicious, Jonathan or Tasma, is therefore recommended if satisfactory and consistent yields of high-quality fruit are desired. It is interesting to record also that the new varieties, Granny Mac and Lalla, are also safe for interplanting with Granny Smith, as they are both cross-fertile with it.

Bud Sports of Rome Beauty.

Another interesting test made at Bathurst was that in which the varieties which have arisen as bud sports of Rome Beauty, viz., Washington Red, C.H.S., and Ohio Red Rome Beauty, were studied in cross pollination with the parent variety. It was found that none of them was able to increase the fruitfulness of Rome Beauty beyond that of its self pollination. They cannot, therefore, be regarded as distinct varieties suitable for interplanting with it.

Not only therefore have the pollination investigations in progress been of value in the probable evolution of superior new varieties of Apples, but also the immediate result of these studies will enable commercial growers to avoid disappointment in cropping from the inadequacy of proper pollinising varieties.

Messrs. Bowman and Atkinson have also conducted some investigations into the seed content of different varieties of Apples. It has been ob-

GRANT FOR RESEARCH.

Aid for Apple and Pear Growers.

Allocations to the States of the grant for investigation and research in the Apple and Pear industry have been announced by the Prime Minister (Mr. Lyons), who said that Tasmania would receive £4,750, which would be devoted to the provision of three instructors for packing and reworking, one orchard instructor, one plant pathologist for the study of black spot and equipment, and one assistant entomologist for the study of jassid and light-brown Apple moth. Allocations to the other States are: — Victoria, £4,650; New South Wales, £1,570; Queensland, £1,550; South Australia, £2,350; and Western Australia, £1,550.

served that varieties differ in the arrangement of their carpels and ovules, which give variations in the number of ovules per fruit. Some varieties such as Gravenstein, Delicious, Rome Beauty, Dunn's and Gano form a small proportion of six-Carpellate and four-Carpellate fruits, although the usual number of two ovules per carpel is relatively constant.

Granny Smith and Cleopatra on the other hand characteristically form five carpels per fruit, but the carpels commonly contain additional ovules, three or four seeds per carpel often being found, and up to 20 seeds per fruit being produced in these varieties.

The occurrence of a similar type of ovule arrangement in certain varieties is of interest, and the possibility of increased seed development in the two varieties Granny Smith and Cleopatra is probably one of the factors responsible for them being more fruitful than other varieties over a period of years.

RATES OF POSTAGE ON NEWS-PAPERS.

Despite many reminders on the part of the Department regarding the prepayment of postage on newspapers, the Deputy Director, Posts and Telegraphs (Mr. R. Lawson) advises that hundreds of newspapers are received in the Mail Branch, Melbourne, each week with insufficient postage affixed thereto.

The rates of postage on newspaper registered at a General Post Office for transmission as such are as follows:—

To places within the Commonwealth, New Zealand and Fiji. To the United Kingdom and Irish Free State via the "All Sea" route. 1d. for every 6 ozs. or fraction thereof.

To the United Kingdom and Irish Free State endorsed "Via America" or "Via France." To other parts of the British Empire and New Hebrides, Banks and Torres Islands. 1d. for every 4 ozs. or fraction thereof.

Elsewhere beyond the Commonwealth. 1d. for every 2 ozs. or fraction thereof.

In the case of newspapers printed outside the Commonwealth or those not registered at a General Post Office the Printed Paper rates of postage apply.

It is also desired to stress that the amount of postage on newspapers is determined solely by weight and not according to the number of copies enclosed in the one wrapper.

ARE YOU

GRUBBING ?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was THE "MONKEY" GRUBBER.

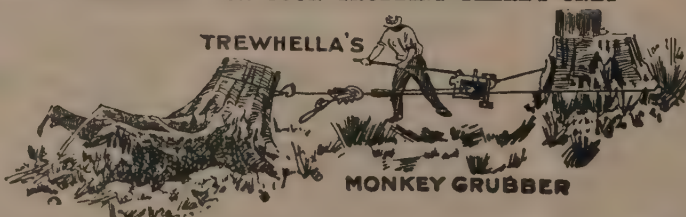
It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

REMEMBER FOR YOUR GRUBBING THERE'S ONLY

H. H. HINDS,
225 Clarence Street,
Sydney.

A. G. WEBSTER
& SONS,
Hobart & Launceston.

TREWHELLA'S



MONKEY GRUBBER

A. ROBINSON,
82f Ann St., Brisbane

Leading Stores and
Merchants, South and
West Australia.

TREWHELLA BROS. Pty. Ltd. Trentham, Vic.

Among the Retailers

Monthly Meeting :: Undersized Fruit Cases :: New Sheds
Registration of Shops :: Retailers' Annual Picnic.

THE monthly meeting of the Executive of the Retailers' Executive was held in the Temperance Hall, Melbourne, on March 5, there was a large attendance of delegates, also Mr. A. W. Schwennesen, Secretary, and Mr. G. E. Kitchin-Kerr, market representative of the V.C.C.A., to address the members with the object of removing any difference of opinion that may exist in reference to the marketing of citrus fruit in general. The visitors, in their remarks, first referred to the improvement during the recent years in the stability of the marketing of citrus fruits, and then to the activities of their Association in endeavoring to prevent the marketing of fruit in an immature state, which must have a very detrimental effect to both grower and seller if permitted to continue. These remarks were endorsed by several delegates, and after a few questions had been discussed and answered satisfactorily, it was resolved that a very hearty vote of thanks be accorded the visitors for their attendance.

Mr. Schwennesen, in reply, stated that he was pleased to know such good friendship existed between the two Associations, and pointed out that it was only by co-operation and good fellowship between growers and sellers that better results can be achieved.

The Secretary reported that the Wholesale Fruit Merchants and the Market Gardeners' Associations had appointed their representatives to the proposed Committee to be formed to confer on any matter concerning the conduct of the Victoria Market, and it was decided that as soon as replies were received from the other Associations concerned, a meeting was to be convened immediately to discuss a few very important problems.

A death certificate was received of a member who had passed away since our last meeting, and a sum of £20 was passed for payment to the relatives. A delegate pointed out this was the fourth payment during the four last consecutive months, and delegates unanimously expressed appreciation of the fact that the Association was in a position to so materially assist in such times of distress.

Under-sized Fruit Cases.

Numerous complaints have been made recently about the number of persons who are selling Apples in the suburbs in undersize cases, some even using the old dummy cases so prevalent years ago. Concerted action is being taken, however, to deal with these offenders, and every effort will be made to put a stop to this fraudulent practice, which is carried on

mostly in the outlying suburbs. One or two heavy fines may have a very decided effect on these birds of prey.

The New Sheds at the Victoria Market.

Satisfactory progress is being made with the erection of the new shed to accommodate the Pea and Bean merchants at the Victoria Market, and there is every indication that it will be completed well within the stipulated time, which will enable the stallholders to transact business under much more favorable conditions, both to themselves, growers and retail buyers alike.

The urgency of having that shed completed as speedily as possible was recognised by the Market Committee, and although the other two will not be completed until later in the year, there is no doubt that satisfactory accommodation can be found for all growers who market their own produce at the market in the meantime.

Registration of Shops.

Every occupier of a shop must register same at the office of the Chief Inspector of Factories, Spring-street, Melbourne; and any shopkeeper failing to do so within 14 days after May 1 in each year is liable to be prosecuted without further notice and fined up to £10.

The word "shop" means any building, or portion of a building or place or any stall, tent, vehicle, or pack in which goods are exposed or offered for sale by retail.

Persons who are purely hawkers or pedlars are not required to register under this Act.

Fees:

The fees for registration or renewal registration are:—

Every shop in which the occupier works alone . . .	£0 2 6
1 or 2 persons are employed	0 5 0
3 or 4 "	0 10 0
5 to 10 "	1 0 0
11 to 21 "	2 0 0
21 to 30 "	3 0 0
31 to 50 "	4 0 0
51 or 100 "	5 0 0

Registration forms may be obtained at the Chief Inspector's Office, or at any police station. Postage stamps will not be accepted in payment.

Something to realise.

Australians are indeed fortunate in being able to purchase citrus fruit at reasonable prices the whole of the year, and although Grapefruit and Mandarins have a comparatively



Executive Committee, Melbourne and Metropolitan Fruit Retailers' Association. The President, Mr. C. V. Nutt, is in centre of front row.

shorter season than other varieties, they can be obtained in a preserved state when not procurable otherwise.

Citrus fruit provide mineral and organic salts, which are wonderful aids to digestion and furnish more of the essential vitamins than any other fruit; particularly are Oranges and Lemons strong in their percentage of what an eminent specialist termed "stored sunlight."

It is a remarkable fact that although those fruits are classed as acid fruits, doctors now recommend them for their digestive properties, as they affect the very different acidity caused by eating other acid-producing foods, such as meat, fish, eggs, bread, etc., in fact, an Orange a day is just as beneficial to health as an Apple.

Many suggestions have already been made with regard to an Orange diet, but there are a few ideas in that direction still being scientifically tested. However, the following is worthy of a trial:—Try fresh Oranges for breakfast, peeled free from pith, and sliced thinly over hot cereal, or with boiled rice. As a change from or-

dinary porridge, a thinly sliced Orange or two, with a dessertspoonful of honey poured over them and a sprinkling of one of the ready cooked cereal foods spread over all, this forms an exceedingly wholesome meal with which to begin the day.

Most people know how to prepare Grapefruit by halving it across the "grain," cutting it all round between pulp and rind, and then sprinkling it with sugar. Another nice way of serving this healthful fruit is to cover it thickly with sugar and sprinkle it with ground ginger or cinnamon. This makes a most beneficial after-dinner sweet, and is most enjoyable.

Housewives should remember that Orange, Lemon, and Grapefruit marmalades are essentially breakfast foods. English folk long ago established this, and an English breakfast without marmalade is simply unthinkable.

Australians' staple breakfast "sweet" should be marmalade from at least September till the following April, and citrus or other fresh fruits should be eaten freely during the day for your health's sake alone.

Notes and Comments.

Mr. Chas. Mawdsley, Treasurer of the Melbourne and Metropolitan Fruit Retailers' Association sends in the following appreciated impressions regarding Conference with the Victorian Central Citrus Association and the Retailers' annual picnic—

"The addresses by Mr. A. W. Schwennesen and G. E. Kitchin Kerr, of the V.C.C.A. were esteemed: both dealt ably with various matters relative to growing, packing, marketing and artificial coloring of the fruits. The various standards of sugar contents in the earlier brands of Navel Oranges, obtaining in other States, were discussed, and it was agreed upon all sides that it would be much better, for all concerned, when a uniformity was arrived at in all States regarding sugar content, etc. Unfortunately for both producer and consumer, there have been in past years an appalling number of immature Navel Oranges sent to market. The Thompson's variety, I believe, placed upon the market, is totally unfit to eat, and this must react to the detriment of the trade as a whole.

"We think this round-table talk with representatives of the growers and the retailers tends to clear up any little misunderstandings that may arise, and it certainly is a step in the right direction. The number of questions fired at the V.C.C.A. representatives by the members of the Retailers' Executive, shows their appreciation to acquire some knowledge of how to avoid the errors of the past. We want to sell the fruit—fruit which will create a further demand. Growers can produce the fruit, and can pack it: all we ask as retailers is: Grow it, pack it, and send it to market, but not before it is ready, and we will faithfully try to do the rest."

FRUIT RETAILERS' PICNIC.

The 37th annual picnic of the Melbourne and Metropolitan Retail Fruit-ers' Association was pleasant and successful.

On the p.s. "Weeroona," the band played old time and modern music: there was community singing and dancing. In the pavilion at Queens-cliff an old friend and ex-committee man, Mr. W. Grant, was M.C. at the dancing—a position he has satisfactorily filled for years.

The official luncheon at the Queens-cliff Hotel was a pronounced success. There were some close finishes in the comprehensive programme of sports during the afternoon. The winner in "stepping the chain" was only half an inch out. By having advertisements on the official programme, this was a financial success, and we wish to publicly thank both advertisers and donors. The increasing popularity of this picnic is evident. The 36 who missed the boat are asked to be on time on the next occasion.

Among the visitors were Messrs. G. B. Minns (Superintendent of Markets), J. N. Williams and Johnson (Victorian Retailers' Council) and R. E. Boardman, "Fruit World and Market Grower." At the official luncheon some happy speeches were made. Mr. Minns, on behalf of the visitors, congratulated the President, Secretary and Committee on their successful effort.

Commenting on the picnic as a whole, the President, Mr. C. V. Nutt said that this was one of the most successful picnics yet held. The benefits from the social intercourse was indeed very great. Members had the opportunity of meeting each other and their executive officers. The nett result would be better trading methods to the benefit of growers and distributors.



P.S. "Weeroona," at Port Melbourne, with 1,750 passengers at the Fruit Retailers' Annual Picnic.

Motor Cars, Trucks, Tractors

CORRECT INFLATION

Gives More Tyre Life

More tyre failures result from fabric breaks than from any other cause. A thorough understanding of how these breaks occur will help the motorist to avoid them.

If every tyre were run with the proper pressure at all times fabric breaks would be a rare occurrence. But in spite of the best intentions the pressure sometimes becomes too low. Under-inflation might be the result of simply forgetting to check the pressure regularly. Then, again, a slow leak caused by a puncture or a damaged valve may allow the tyre to become too soft. In this condition a tyre is very susceptible to fabric breaks.

In fact, almost all fabric breaks are due to under-inflation.

It should also be noted that over-inflation will not provide additional protection against fabric breaks.

Goodyear engineers have proved that all tyres should have the pressure tested once a week by a reliable gauge, which has been checked for correctness against a master gauge, and any tyre showing a reading under the recommended pressure should be reinflated.

In the first place, motorists should ascertain from their tyre dealer or garageman the correct pressure for the tyres on their car. This information can also be secured from the car instruction book. The pressure should not be allowed to drop more than 3 lb. below the recommended figure.

It is of prime importance to maintain the correct pressure, and only regular weekly testing can assure this.

Do not rely on your eye in judging inflation. A pressure of 15 or 16 lbs. will support a car without showing undue deflection of the tyre, yet this pressure is probably less than half of what it should be.

An under-inflated tyre, after a severe blow, might go flat a few days or even a week later. When the tyre is removed it is found that the original break, which probably occurred in only one layer of cords, gradually increased in size and broke through the remaining plies, finally pinching the tube.

Low pressures, or under inflation, also results in rapid tread wear, rim cutting near the bead, and excessive generation of heat within the carcass, causing shoulder breaks and separation between the plies of cord.

CHEVROLET COMMERCIAL VEHICLES.

Attention is drawn to the advertisement of Preston Motors Ltd. in this issue regarding Chevrolet trucks. The Chevrolet Maple Leaf 3-ton truck and the 18 cwt. Commercial have been released by General Motors-Holden's Ltd., and distributed by Preston Motors Pty. Ltd., 114 Franklin-street. The Maple Leaf is offered in two wheelbase lengths, 141 inches and 165 inches, and is fitted with the Chevrolet six-cylinder valve-in-head engine, developing 72 h.p. The transmission provides four forward speeds and reverse, with a power take-off incorporated. Other chassis features are four-wheel hydraulic brakes and heavy duty spiral bevel rear axle, with a final ratio of 6.33 to 1.

Helper Springs.

The springs are semi-elliptics front and rear, the rear ones being equipped with six-leaf helper springs bolted above them. These come into operation when the truck is operating at maximum loading. A feature of the frame is the use of "alligator jaw" cross members, which grip the side members with both top and bottom flanges. Dual rear wheels are fitted. An interesting special design of cab is available—a sleeper cab—in which, by hinging the seat squab up, comfortable berths are provided for two big men. Body types available are—Drop sides, platform and coaming model, semi-trailer model and tipper.

The Commercial.

The underlying idea of the design of the Commercial is to provide a truck for those users who never carry more than a medium weight load. The maximum capacity is 18 cwt., and the chassis is compact, with a handsome radiator, bonnet and cowl. Bodies available include a panel van, well-sided delivery, and drop-sides delivery. These models can be obtained with open or sedan type driver's compartment.

The chassis frame of the truck is a sturdy unit, well braced with cross members, while the side members extend well back behind the rear spring shackles to provide a firm foundation for the bodywork. The wheelbase is 112 inches, and the overall length 164 inches. Springs are semi-elliptics, front and rear, and the back axle is a special heavy duty design. Another excellent feature is the four-wheel hydraulic braking system.

CHAMOIS LEATHERS.

Chamois leathers quickly become hard and ineffective in use if they are not specially cared for. Chamois leathers should never be dried quickly, and they are best kept in a covered jam jar when not in use. If a chamois leather has become hard and brittle, it should be left to soak for some hours in a jug of rain-water. Then squeeze out some of the moisture and rub all over with powdered borax. The borax should be rubbed well into the leather to be effective. Leave for a time and rinse finally in several bowls of clean rain water. The chamois leather will be clean and soft after this treatment.

OIL PRESSURE GAUGE.

What it May Indicate.

Most cars nowadays are fitted with an oil pressure gauge, which is generally so well made that they seldom get out of order. The gauge is placed in the oil circuit, between the oil pump and the engine, and in this position it is instantly sensitive to variation in oil pressure. Sometimes, when starting up from cold, it may be noticed that the oil pressure considerably exceeds the normal figure. This, however, should give no cause for concern, so long as the pressure returns to normal when the engine has become thoroughly warmed up. If the pressure remains high after the engine has been running for some time, inference is that there is an obstruction in some portion of the oil circuit, for in face of such a gauge reading the oil cannot be flowing so freely as it should do.

SAFETY HINTS.

Following are some sound practical safety hints issued by the National Safety Council of Australia:—

Remember that the safety of the public comes first.

You cannot see round a curve, drive accordingly.

Use your gears going down steep hills to act as a brake.

Drive as near to the left side of the road as is practicable.

You may be speeding although doing less than 60 miles an hour.

Do not pass another vehicle on a curve—it is dangerous. So is passing another vehicle on a hill.

Always regulate your speed to the circumstances, conditions, and traffic on the road.

Never assume that the other fellow will always do the right thing.

Always give hand signals correctly, clearly, and in ample time.

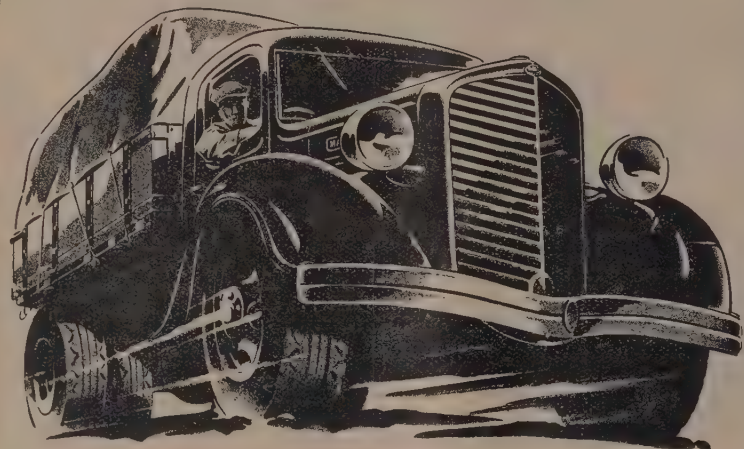
See that your head lamps are properly focussed. Dazzle is dangerous.

Always park your car well away from a traffic stream, and never park on a curve.

Remember that just blowing your horn is not sufficient precaution when crossing an intersection.

Endeavor to recognise the "show-off" driver, the timid driver, and the erratic driver, and prepare accordingly.

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EXPORT OF POTATOES

Redskin Varieties Recommended for Interstate Trade.

Tasmanian Grading Appreciated.

THAT VICTORIAN GROWERS should produce more Redskin Potatoes for export was the opinion expressed by Mr. J. T. Ramsay, Potato expert of the Victorian Dept. of Agriculture, recently, when giving evidence before the Parliamentary Public Works Committee.

While white-skinned Potatoes were popular in Melbourne, Sydney preferred red-skins, said Mr. Ramsay, and paid from £2 a ton more for them. Red-skin Potatoes were hard in texture and better for handling and shipping. White-skin Potatoes were soft and brittle.

Tasmanian growers paid more attention to the grading of their product, but Victorian growers were not alive to their opportunities as they could grow red-skins as successfully as white-skins. Only two-thirds of the crop, which ranged from 180,000 to 200,000 tons yearly, was used for local consumption.

Most of the export Potatoes came from the Ballarat district, continued Mr. Ramsay. New South Wales was unable to supply its own market, as the climate was not cool enough for growing crops. Gippsland soil would be most suitable for producing red-skin Potatoes.

In reply to questions, Mr. Ramsay said that under normal conditions, the Victorian crop would approximate 200,000 tons, of which 140,000 tons were required for local consumption. N.S.W. could not produce sufficient for her requirements because of the unfavorable climate (too hot): their imports were mainly from Tasmania. The Sydney market was always from 30/- to £2 a ton higher than Victorian parity. Queensland also imported her Potatoes from Tasmania.

In response to a question by Mr. H. I. Cohen, M.L.C., Mr. Ramsay said that Potatoes could be successfully shipped to Fiji and Honolulu: they had also been sent to Egypt, but heavy freight was the limiting factor.

Mr. Norman McKay, Senior Potato Inspector, said Sydney was not the best market for Victorian white-skinned Potatoes. The red-skinned Tasmanian Potatoes were preferred. There had been no shipments of Potatoes from Tasmania to Victoria between 1927 and 1935.

Owing to the long dry spell the Potato harvest in Victoria this year will be below average, and payable prices are expected for those growers with good crops.

Last year £11/10/- a ton was realised in August. Similar prices are expected this year. With a crop of 5 to 6 tons per acre a price of £5 to £6 per ton is considered payable: with crops of 2 to 3 tons per acre, £8 to £10 per acre is necessary.

The Victoria Market is increasingly becoming the centre of the Victorian Potato business.

EARLY BROWNELL POTATOES.

Early Brownell Potatoes planted in the Koroit (Vic.) district from the end of July to early October, have given good yields, being free from the blight which attacked other varieties.

GLASSHOUSE TOMATO CULTURE

Improved Strains are Being Raised.

MUCH VALUABLE WORK in the evolving of improved varieties and strains of Tomatoes for both heated and unheated houses is being conducted by the N.S.W. Dept. of Agriculture.

The Director of Plant Breeding, Mr. H. Wenholtz, states that the task of breeding Tomatoes is complicated by the need for evolving varieties which are resistant to Fusarium wilt and leaf mould. All the Chinese types, also Planters' Favorite and Kondine Red are highly susceptible to both diseases.

The Red Currant Tomato is resistant to these diseases, but it has not yet been ascertained whether lines of local crossbreds of this parentage carry this resistance. Some lines of similar parentage, however, received from Dr. L. J. Alexander, of the Ohio Agricultural Experiment Station, have remained free from leafmould. These lines are of no value for direct culture, being poor croppers, with poor types of fruit, and they have been crossed with Planter's Favorite and Potentate at Hawkesbury College by Mr. Shirlow.

Improved Strains.

Although a gradual change-over is being made from the cheaply constructed unheated glasshouse to the expensive heated type for the culture of Tomatoes, many houses of the former class exist. For such houses the rough-fruited Chinese types of Tomatoes are the only ones which set their fruit satisfactorily at low temperatures, and these types therefore produce the earliest fruit under such conditions. These Chinese types of Tomatoes are not, however, of very good appearance or quality, and, moreover, the unheated glasshouses provide less control of diseases, such as Fusarium wilt and leaf mould.

Growers who are forced to grow the Chinese types on account of their excellent fruit-setting character, are, therefore, seeking improved varieties for their conditions.

Mr. N. S. Shirlow, assistant plant breeder at Hawkesbury College, is en-

gaged in the task of evolving improved varieties of Tomatoes for the conditions of both unheated and heated houses. Of the rough-fruited Chinese types, the variety known as South Australia Dwarf Red produces the earliest fruit, because of the excellent setting on the lower flower clusters, but the fruit is of very poor quality, and, according to Mr. Shirlow, seems hardly worth growing. Other varieties of the Chinese type, such as Paterson and Intermediate, and various selections under local names, produce fruit of somewhat better quality, and crop better than South Australian Dwarf Red.

In commercial heated houses, the Chinese types have been largely discarded in favor of smooth, prolific fruited varieties, such as Planter's Favorite, and Kondine Red. Potentate, introduced from the Tomato Research Station, Cheshunt, England, is of a similar type to Planter's Favorite. The fruit is smooth, larger than most English varieties of the prolific type, and of good quality.

SOUTH AUSTRALIAN FRUIT-GROWERS AND MARKET GARDENERS' ASSOCIATION

CELERY SECTION. Mr. George Strange (Chairman), presided at the Annual meeting of the Celery Section. Mr. C. W. McRostie (Melbourne Representative) attended and submitted a report dealing with the Melbourne Market. The meeting was well attended, and transport, marketing and advertising were dealt with. For the first time since its formation the Section has employed a full time organiser, and the effect of his activities is already being felt.

OTHER SECTIONS. The Association has shown a steady advancement in recent years, and so as to cover all sections of growers it has been decided to sectionise the Association. For some years the Tomato, Celery and Cherry Sections have been in a strong position, and the same can be said of the Citrus Section, which has done very good work, particularly since the New Zealand Export has developed. The latest Section to be formed is that of the Potato Growers,

and some very satisfactory meetings have been held in growing areas. Recently Mr. Geo. Collett, (Organiser of the Vegetable Section) visited Sydney to attend the Inter-state conference called by the Federal Government. It is now suggested that a Soft Fruits Section should be formed. When this is done all growers will be catered for. Mr. Frank Hughes is taking an active interest in the attempt to organise the soft fruit growers.

THE WATER PROBLEM. Usually at this time of the year fruit and vegetable growers on the Adelaide plains are confronted with a shortage of water, and this year the problem is very acute. It is to be hoped that when the Mount Bold Scheme is completed, the position will be improved. Recently the Association Secretary (Mr. Kimber) organised a party of growers to visit the Mount Bold Undertaking, and those who attended spent a very interesting and instructive afternoon.

TOMATO SECTION. Despite warnings issued by the Association the construction of glass houses is still proceeding. Most of the construction, however, is being done by city business houses, and not by growers already in the industry. Last season was a most difficult one, and the further construction of glass houses is not going to assist the position.

TRADING SOCIETY. This section is showing a steady improvement in turnover, and growers are joining up rapidly. Already considerable savings to growers in their purchase of manures and other requisites have been shown.



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CABBAGE GRUB.

Treatment of Infested Crops.

The small green caterpillars which riddle the leaves of Cabbages and Cauliflowers can be controlled by dusting the plants with lead arsenate or with derris root powder, states the N.S.W. Dept. of Agric. Derris is of especial value for dusting these crops during their later stages of growth, as it is a non-arsenical and does not leave a poisonous residue. Treatment with lead arsenate, on the other hand, must be discontinued at least six weeks before cutting, or as soon as the hearts start to form.

For the early stages of growth before hearting commences, the cost of control with derris is slightly more expensive than the lead arsenate treatment. Where, however, derris is applied throughout at seven to ten day intervals, it will also check green aphid infestation. These aphids occur on the centre leaves and on the undersurfaces of the outer leaves, and may stunt the plants, and later affect the appearance of the hearts for marketing.

Derris does not, however, control the slaty-grey aphids which usually occur in clusters on the upper surfaces of the leaves. Individual plants infested with these aphids should be dusted with nicotine dust.

Where green aphid infestation is likely to occur, as for example in many intensely cultivated localities in the metropolitan area, Cabbages and Cauliflowers both in the seed-bed and after transplanting should be dusted with derris at seven to ten day intervals. Where the green aphids are not abundant and the slaty-grey ones predominate, as in most inland areas, lead arsenate should be used against Cabbage moth during the early stages of growth, followed by derris in the hearting period.

For Cabbages and Cauliflowers lead arsenate and kaolin are mixed in equal parts, whilst the pure derris root powder is mixed with eight parts of kaolin or talc. Either of these two dusting mixtures may be home-made at a cost of approximately 8d. per lb., or they may be purchased ready mixed at approximately 1/- per lb.

On no account should lime be mixed with derris, as it reduces its efficiency. Attention is also drawn to the necessity for storing derris in an air-tight bag or tin or other container, as its toxic ingredients are affected by exposure to air or light.

Fertilizers for Potatoes.

FERTILISER TRIALS WITH POTATOES were recently conducted in some of the principal Potato-growing districts of Victoria by Mr. J. T. Ramsay, of the Department of Agriculture. At Beech Forest remarkably high increases in yield were obtained from additions of fertilisers. The heaviest dressing—9 cwt. superphosphate and 2 cwt. ammonium sulphate an acre—gave an increase of 5 tons 12 cwt. an acre of tubers, representing an increase of 260 per cent. compared with the plot that received no manure. So far the tests show that, although the greatest increase per unit of fertiliser is given by the dressing of 6 cwt. superphosphate and 1 cwt. ammonium sulphate, the heavier dressing is economically sound.

TESTS WITH POTATOES.

The N.S.W. Department of Agriculture has decided to conduct a trial to determine the relative merits of the strains of Satisfaction potato.

Interested growers of improved strains of this variety are invited to communicate with the Department of Agriculture, Box 36a, G.P.O., Sydney. Each competitor is required to supply sufficient seed (1 bag equals 1½ cwt.) to sow the trial.

Instructions will be forwarded as to how to consign the seed on receipt of entries. The freight will be paid by the Department.

ONION BOARD APPROVED.

By the narrow margin of 3 per cent., Onion growers in Victoria recently declared their desire for a Board under the Marketing of Primary Products Act 1935; 1,088 votes were recorded out of a voting list of 1,232. Of these 689 voted for the establishment of a Board, 395 voted against a Board, and 4 votes were informal.

60 per cent. of producers entitled to vote was the number required to authorise a Board, and 63 per cent. was reached.

The following were elected as members of the Onion Marketing Board under the provisions of the Victorian Primary Products Marketing Act:—Messrs. T. J. Carmody (Western District), E. O'Toole (Warrnambool), E. Henderson (Portarlington), R. E. McIndoe (Leongatha). The Government nominee is Mr. J. P. Morrissey. Mr. Carmody was elected chairman.

Somerville Show.

Fine Display of Fruit.

The fortieth annual show of the Somerville and District Fruitgrowers' Association, which was opened by Mr. G. L. Chandler, M.L.C., on March 25, was a comprehensive one, many excellent varieties being displayed.

Apples were a feature of the show, and were particularly free from spray blemish or defects of any kind.

In the championship classes, Messrs. G. G. Cole & Sons, of Tyabb, were the award winners for the best tray of Jonathan Apples and the best tray of Apples in the show.

In the class for 18 varieties of Apples, distinct, ripe or unripe, J. D. Grant & Son were successful with well-grown specimens of Red Statesman, Granny Smith, Delicious, Jonathan, Duke of Clarence, Emperor Alexander, Rome Beauty, London Pippin, Staymans Winesap, Alfriston, Prince Alfred, Red Rome Beauty, Rokewood, Sturmer and an unnamed seedling dessert Apple. Mr. W. F. Boe was the successful competitor in the classes for six varieties and 12 varieties distinct.

Most noticeable exhibits in the tray classes were the trays of Emperor Alexander shown by J. D. Grant & Son.

In the Pear classes the principal winner was also W. F. Boe, who showed good specimens of both dessert and culinary varieties.

The fruit packing class for two cases of Apples, one wrapped and one unwrapped, packed by school children attending the Department of Agriculture packing classes, was won by Dorothy Dennett, with 96 points, Phyllis Heywood being second with 91 points.

Other successful competitors were:—C. C. Barber, J. Brunning & Sons, A. E. Thornell, W. J. Armstrong & Sons, G. E. Shepherd, R. S. Thornell, A. J. Benton, S. H. Hawker, W. Monk, Barbara Murray, W. Young, E. J. Murray, W. Young, E. J. Murray, K. Bear, R. J. Thornell, T. W. Brunning, R. N. Mills, A. E. Dennett, R. J. Mair, A. J. Benton, Roy Hilton, Joan Kennedy, R. L. Thornell, A. Lord, G. A. Baudinette, Mrs. J. Green, S. Lord, C. K. Thornell, J. Webb, K. Vear, S. L. Scott, W. Young, A. White, T. W. White, R. H. Marriott, M. de Bernardi, and F. J. Mills.

At the official luncheon, Mr. J. Jordan, of Burwood, was presented with a life membership badge in recognition of his services as judge at the society's shows for the past 35 years.

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FOURTEEN ACRES ORCHARD in Full Bearing.

Apples, Pears and Plums, and four acres grazing land; Also house and land situated approx. ¼ mile from orchard. Owner not now resident in State.

Full particulars available from agent for owner—

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S.P.C. CANNERY CREATES NEW RECORDS.

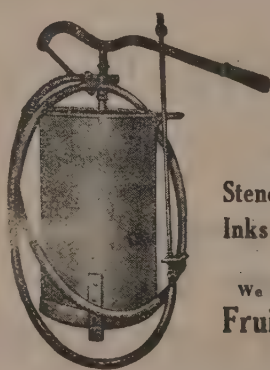
The processing of the 1936 crop of canning fruits in the Goulburn Valley is nearing completion, and the indications are that the pack of the Shepparton Fruit Preserving Co. Ltd., which is marketed under the popular "S.P.C." brand, will, when completed, constitute a new record in the company's operations.

The Apricot and Pear crops have been much heavier than in recent years, but this is offset to some extent by the slightly lower crop of Peaches.

Due to the remarkably fine and favorable weather which has continued throughout the ripening period the crop of canning fruit delivered to the cannery has been excellent, and the quality of the processed fruit should be equal to, if not superior to, the packs of previous years.

That the work in the cannery has been carried out with the utmost efficiency and smoothness throughout the whole of the organisation, is amply demonstrated by the fact that the previous record for one day's production has been broken on five occasions during the past few weeks. The new record, which was created in ordinary working hours, on March 20, now stands at 235,046 cans.

Despite the fact that large amounts have been expended on new buildings and plant during the past few years, an increasing acreage of canning fruit in the Shepparton irrigation area foreshadows further additions to this already very large industrial enterprise. We learn that this matter is receiving serious attention at the moment, and at an early date it will not be surprising to hear that contracts have been let for extensions and additions which will involve a very large outlay.



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Fruitgrowing in South Africa

LARGE INCREASE IN APPLE AND CITRUS PLANTINGS.

A VISIT TO SOUTH AFRICA was recently paid by Mr. W. J. Spafford, Deputy Director of Agriculture for South Australia. An interesting review of agriculture in South Africa was compiled by Mr. W. J. Spafford, and published in the "Sth. Aust. Journal of Agriculture."

In view of the fact that South Africa is exporting Apples, Pears and Oranges to U.K. during practically the same period as Australia the following points extracted from Mr. Spafford's report will be perused with interest.

THE PRODUCTION OF FRUIT and wine has rapidly become very important in South Africa, and this largely because of the great care exercised in preparing the articles for the export markets. This effort to capture and retain a market has been particularly successful where soft fruits are concerned, and fruits from the Union, and notably Grapes, Plums and Peaches, are said to open up in the British markets in as good a condition at least as similar fruits from any other country sending them to Great Britain. That the progress made in the industry has been great in the past 20 years or so can be seen in the next table, where the number of trees from which fruit is picked for sale is set out for the two seasons. 1911 and 1930:—

Commercial Fruit Trees in South Africa.			
Kind of Fruit.	Commercial Fruit Trees.		
	1911.	1930.	
	No.	No.	
Apple	1,429,858	2,464,370	
Pear	650,937	1,009,740	
Plums	635,646	1,379,250	
Peach	5,902,480	3,590,670	
Nectarine	98,687	76,420	
Apricot	1,025,193	2,190,820	
Orange	985,602	3,883,350	
Lemon	172,856	196,890	
Mandarin	404,189	272,260	
Mango	*96,685	230,840	
Other fruits	602,020	1,792,570	
Vines, acres	*48,358‡	76,896‡	
‡1918. *Acres.			

The figures disclose a great increase in all kinds of fruits except Peaches, Nectarines and Mandarins, and as planting of new orchards of most other kinds is being continued each year, a further increase in production will be seen in the future.

Shipping Fresh Fruits to Europe.

Most of the fresh fruits, with the exception of citrus, are shipped from Capetown, and the arrangements for cooling and handling the fruit are really good, only that the quantities being handled have increased so rapidly that some congestion results in the busiest part of the season. The work of pre-cooling, cold storage, and loading of boats is expeditiously carried out with the minimum of hand labor, and very little double handling of the boxed fruit. Practically all fruit to be exported comes from within 110 miles of the port, and for the short journey, specially cooled railway vans are unnecessary, and ordinary louvred vans fulfil all requirements.

On arrival by railway the boxes of fruit are stacked on trucks with wheels so small that the bottoms of the trucks are only a few inches off the ground, and so stacked that the labelled ends of all boxes are visible. The trucks have room for five rows of boxes, but the boxes for the centre

row are stacked on top of the other four rows until the inspection is completed, and the labelled ends of boxes have been marked to show they have been passed by an inspector. The boxes in outside rows have labels facing outwards, whilst those in the second rows have their labels facing the alley-way, where the middle row is to be stacked.

As soon as the inspection is completed the surplus boxes on the four rows are stacked in the alley-way, on the truck left for the purpose, and this small job is the only one in which there is any second handling of the boxed fruit, from the time it is taken from the railway trucks until stacked in the ship's hold.

As soon as the inspection and branding are completed a small electric motor hooks on to the truck loaded with fruit and hauls it into the pre-cooling chamber, where it is left until the temperature has been brought sufficiently low, when it is again connected to a motor, which takes it to the cool stores, to remain until a boat is ready to receive the fruit.

The cold stores at Capetown consists of a four-storey concrete building, which runs the whole length of a long wharf, the top two stories being continuous, but the ground and first floors are broken in several places with wide openings, to admit of all kinds of traffic from the land to the side of the ships.

The non-continuous floors consist of the pre-cooling chambers, whilst the top floors are the cold stores, where temperatures are lowered to the ideal for holding the particular kind of fruits being exported at the time. Fruit that has to be taken from any floor to one that is higher is hauled by an electric motor to a lift in the close vicinity, the truck containing the boxes of fruit is pushed on to the lift by the motor, and on arrival at its destination a similar motor hooks on to the truck and takes it to the chamber where it is to be stored. The chambers of the cold stores have doors on the inside, which open to admit the trucks of fruit, and doors on the wharf side to allow the pushing of the trucks on to a platform outside of each doorway, from which the travelling wharferane picks up truck and all and lowers it down the ship's hold.

This putting of the truck loads of fruit into one side of the cool chambers and out the other side, and right into the hold of the ship is done with the minimum of labor, and perhaps more than equal importance, with the least possible change of temperature.

This method of handling fruit from railway truck to ship's cool chambers can only be carried out efficiently when plenty of lifts are available of sufficient size to take at least one truck and its load, from one floor to the other with some speed.

The handling of export fruit is facilitated in South Africa by the insistence on the use of a specified colored wooden cleat on the boxes for every different kind of fruit, no matter in what part of the Union the fruit is packed. For instance, all boxes of Grapes have blue cleats, Pears have green, and so on for every different kind of fruit, and the convenience of knowing what is inside the boxes by the bright colors of the cleats is a great one indeed, particularly when it becomes necessary to use unskilled labor in shifting consignments.

To reduce the congestion at the Capetown Cold Stores inspectors are

sent into the more important country fruit-growing centres to inspect and pass fruit for export at the packing sheds. This appears to have served its purpose fairly well, and gratifies country dwellers quite a lot.

Research Work With Fruit.

Because of the importance of the fruitgrowing industry, and the recognition of the possibilities of expanding it, the South African Department of Agriculture is doing a considerable amount of research work on all phases of horticulture. In the south-west portions of the country, gardens are maintained for investigating the problems connected with deciduous fruits and vines, whilst in the warmer climate of the sub-tropical zone, citrus and tropical fruits are experimented with. Research is also being conducted into cool storage problems.

Varieties of Fruit Grown for Export.

A really large assortment of varieties of all the various kinds of fruits are exported, but with each kind a few predominate, and only very small quantities of most other varieties are shipped out of the country. The relative importance for export of the dif-

ferent fruits, and the different varieties of fruit, are shown below for the season 1932-33:—

Importance of Various Fruits (Non-Citrus) Exported from South Africa in 1932-33.

Fruit.	Tons (40 cub. ft.)	Percentage.
Grapes	21,773	39.4
Pears	14,560	26.3
Plums (and Prunes)	8,645	15.6
Peaches	5,660	10.2
Apples	3,160	5.7
Nectarines	676	1.2
Melons	326	0.6
Apricots	322	0.6
Mangoes	61	0.1
Grenadillas	36	0.1
All others	78	0.2

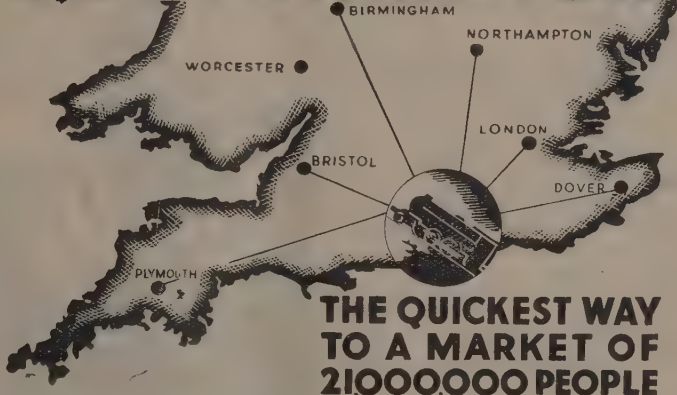
Principal Varieties Exported from South Africa in 1932-33.

(Percentages Exported Shown in Brackets.)

Grapes. — Waltham Cross (25.6), Hanepoot White (11.7), Almeria (Ohanez) (9.6), Hanepoot Red (9.3), Gros Colman (7.9), Henab Turki (7.5), Barlinka (7.5), Raisin Blanc

(Continued on page 30.)

SHIP THROUGH SOUTHAMPTON



THE QUICKEST WAY TO A MARKET OF 21,000,000 PEOPLE

"First to the markets"—what a wealth of meaning there is in that phrase. A few days saved in time; a few points saved in handling, means a tremendous difference in the market value of your perishable goods.

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Southampton—Britain's most modern port—can save you days. For Southampton, with modern docks and discharging facilities, huge cold storage plant, special sheds, etc., is specially equipped to handle perishable produce.

The docks and discharging arrangements are under the control of the Southern Railway of England, and everything from ship-side to markets is co-ordinated to make for speedy and expert handling. In a minimum of time your produce reaches markets of 21,000,000 people within 125 miles. Ship through Southampton, and gain the advantages of speedy transit and reduced handling.

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Export & Commercial News

TRADE WITH CEYLON AND INDIA.

Refrigeration & Transport Problems.

The Minister for Commerce (Dr. Page) advises that during 1934 Australia bought £812,941 worth of goods from Ceylon and sent in return £467,759 worth, including Apples and Grapes £22,541, dried fruits £6,763, jams and jellies £2,020.

Refrigeration Problems.

The carriage of refrigerated products to Ceylon and India is not very satisfactory, the Minister states. It is necessary to transship goods at Colombo and Singapore as a general rule, and goods so dealt with must be placed in cold storage ashore while awaiting shipment to other destinations. This involves transport from the ship to the store, then back again. Perishables deteriorate rapidly in a tropical climate.

Exporters of fresh fruit believe that a larger market exists for fresh fruit in India, but the difficulty in the past has always been to obtain direct shipping services, though one has now been promised from Fremantle to Bay of Bengal ports if cargoes are available.

There appears to be a limited amount of refrigerated space available

at Colombo, and the freight rate of 4/6 per bushel case plus 18 per cent. exchange militates against increased shipments. But for goods consigned to India there is the additional freight from Colombo to the destination plus cool store charges and handling costs. Oversea vessels plying between Australia and the United Kingdom and calling at Indian ports apparently do not seek Australian refrigerated cargo for several reasons—they prefer to reserve their space for through shipments as intermediate stops involve opening the refrigerators or fitting ships with small refrigerating compartments.

Much of the fruit now sent to India is carried on deck—Dr. Page examined a shipment travelling on the decks of the "Narkunda."

The Minister for Commerce will make further inquiries, and it is expected that the Australian Trade Delegation to India headed by Mr. Sanderson, will be asked specially to report on this matter.

SELLING FRUIT IN LONDON.

Mr. I. Friedmann, of Covent Garden Market, London, who has been in the fruit trade for 25 years and established on his own account for the past three years, advises that an alteration is taking place in connection with the handling of Australian fruit in London. Mr. Friedmann states that whereas in past years contracts for Australian Apples were placed long before the commencement of the season, this method is declining as buyers prefer to operate when fruit is actually in London, and that as a result more fruit should go forward on a consignment basis.

In an interview, Mr. Friedmann states it will be necessary to depart from the established custom of sending fruit to any one firm to be sold from their sale rooms, thus growers and shippers will have to avail themselves of the services of a specialised distributor who will give personal attention to every consignment, and be in a position to dispose of the fruit by three methods: (a) Selling direct from

dock; (b) Sale by auction; (c) Distribution to the firms on the market.

Consignments placed in this way will do away with loss or waste while awaiting sale, which so often happens through overloading. The chief advantage, however, will be constant and personal supervision over sales and prices.

GRAPES TO U.K.

Test Shipments from Queensland.

The "Imperial Star" took a trial shipment of 176 cases of Queensland Muscatel Grapes to England on her last trip. This follows the demonstration of the practicability of exporting Grapes to Canada, and the present shipment is intended as a test of the possibility of regular shipments being landed and satisfactorily marketed in Britain. To induce growers to ship in this way the Queensland C.O.D. guaranteed a fixed price. It will be interesting to learn how the Grapes arrived and the returns received, above shipping expenses.

(Continued from page 29.)

(6.3), Prune de Cazouls (3.6), Alphonse la Vallée (2.5), Hermitage (2.2), Rosaki (Waltham Cross) (1.9), Gros Noir (0.7), Barbarossa (0.6), Red Emperor (0.6), Flame Tokay (0.5), Molinera Gorda (0.5).

Pears.—Winter Nelis (16.2), Bon Chretien (15.9), Beurre Bosc (13.4), Keiffer (11.2), Doyenne du Comice (9.9), Glou Morceau (8.7), Josephine (8.0), Louise Bonne (6.2), Beurre Hardy (4.7), Beurre Diel (1.8), Clapps Favorite (1.6), Forelle (1.2).

Plums.—Santa Rosa (33.9), Kelsey (28.4), Gaviota (11.4), Wickson (8.4), Prunes (6.1), Beauty (3.2), Methley (2.2), Satsuma (1.9), Apple (1.8).

Peaches.—Peregrine (33.6), Elberta (16.9), Inkoos (13.6), Pucelle (11.2), Duke of York (9.0), Cape Freestone (4.5), Early Alexander (4.2), Schoongezicht (1.9).

Apples.—Dunn's Seedling (46.1), Ohenimuri (20.6), White Winter Pearmain (8.8), Delicious (7.2), Jonathan (4.0).

Nectarines.—Goldmine (83.3), Early Rivers (14.3).

Apricots.—Royal, (72.3), Cape (24.8).

SUPPORT CO-OPERATION

By Consigning your
FRUIT to the

Producers' Distributing Society Ltd.

(Late Coastal Farmers' Co-operative Society Ltd.)

Agents for

"BLACK LEAF 40"
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QUEENSLAND SHOW DATES.

Kingaroy—April 22 to 24.
Gympie—May 22 and 23.
Maryborough—May 26 to 28.
Bowen—July 8 and 9.
Cleveland—July 10 and 11.
Nambour—July 16 to 18.
Caboolture—July 31 and Aug. 1.
Royal National—August 17 to 22.

PROSECUTIONS.

Under the Vegetation and Vine Diseases Act, prosecutions are continuously taking place in Victoria.

Fruiterers at Footscray, Brunswick, Werribee, West Melbourne, and McKinnon, were prosecuted on various charges of exposing for sale fruit affected with red scale and black: others for topping Tomatoes and selling Peas and other produce with misleading labels.

Growers at Wandin, Doncaster and Blackburn were also prosecuted and fined for selling Apples affected with black spot, topping Plums and failing to effectively deal with the codlin moth pest in the orchard.

N.Z. CITRUS EMBARGO.

Replying to a deputation from the N.S.W. Chamber of Fruit and Vegetable Industries on March 16, on the subject of the N.Z. citrus embargo, the Hon. H. V. C. Thorby (Assistant Minister for Commerce), said the Government was doing everything possible to secure the admission of fruit into N.Z., when certified free of disease.

The deputation said N.Z. was importing fruit from other countries. The principal fruits affected were citrus and Cherries.

APPLE AND PEAR EXPORT.

Figures relative to the export of Australian Apples and Pears this season have been supplied by the Department of Commerce as follows (in cases):—

Apples.	
Tasmania, to March 28 ..	1,126,176
Victoria (28/3/36)	314,461
N.S.W. (to March 21) ..	65,064
Sth. Aust. (to March 14)	119,079
West Aust. (to March 7) .	18,301
Queensland (to March 21)	21,407
Pears.	
Tasmania (to March 28) .	45,683
Victoria (28/3/36)	171,979
N.S.W. (to March 21) ..	16,506
Sth. Aust. (to Feb. 28) ..	148
West Aust. (to March 7)	322
Queensland (to March 21)	1,207

ONIONS PREVENT RUST.

There is nothing better than an Onion for removing rust from steel. Rub the rusty part with the Onion, leave the juice on for twenty hours then polish with bathbrick and turpentine. Or rust of long standing on a knife blade can be completely removed by plunging the blade into an Onion and leaving it standing for a time.

APPLE SALES IN LONDON

LONDON, April 4.

Australian Apples are in fair demand and are mostly in excellent condition. Vic. Jon. are selling from 8/9 to 11/6; Cleo., 8/6 to 10/-; King Davids, 8/9 to 10/-; Londons, 8/6 to 10/-; Granny Smiths, 11/- to 13/-; Dunns, 8/6 to 8/9. N.S.W. Jon. 9/6 to 11/-, exceptional 12/-; Cleo 9/- to 11/-; King Davids, 9/- to 10/- Londons, 9/- to 10/- Granny Smiths, 10/6 to 12/6; Cox's, 16/- to 21/- S.A. Jonathans, 11/- to 11/6; Cleo., 10/9 to 11/- N.Z. Alfrist., 11/- to 13/- Vic Packham pears are quoted from 9/- to 13/-; N.S.W. Packhams, 8/6 to 10/9; Boses, 7/6 to 10/-.

N.S.W. CITRUS EXPORT ASSOCIATION.

Federation Withdraws Mr. Herrod's Services.

At the last meeting of the board of the Fruitgrowers' Federation of N.S.W., it was decided, after discussion, to withdraw the services of the secretary of the Federation from his position as secretary of the N.S.W. Citrus Export Association. The Federation, however, advises that they are prepared to co-operate with the association on matters of mutual interest.

In view of this decision, early steps are being taken to call a meeting of the executive committee to make arrangements rendered necessary by this decision.

FRUIT BARROWS IN SYDNEY.

Earnest endeavours are being made by the Fruitgrowers' Federation of N.S.W. for the continuance of fruit barrows in Sydney streets. Strong representative deputations have put their views forward, but the City Council favors the abolition of the barrows because of traffic congestion.

SYDNEY SHOW.

Increased Entries in "Pyramid" Classes.

The fruit section at the forthcoming Royal Easter Show, Sydney, has shared in the extra support accorded the society.

In the pyramids an additional two and one, respectively, will be staged for the District Collection of Apples and Pears, the districts represented being: — Apples—Hartley District Fruitgrowers' Association, Leeton Agricultural Society, Goulburn and District Chamber of Commerce, Orange District, Bathurst Fruitgrowers' Association, Tallong Fruitgrowers' Association. Pears—Leeton Agricultural Society, Goulburn and District Chamber of Commerce and Tallong Fruitgrowers' Association.

FRUIT EXPORT TO U.K.

(The Editor, "The Fruit World.")

Sir,—Referring to a letter under the above heading in your issue of 5/2/36.

No port can properly claim to be the economic distributing centre for any area which can be served at less cost via another port which is nearer, and equally well equipped for efficient handling of cargo.

A glance at a reliable map which indicates the distribution of population in areas nearest to London, Southampton and Bristol respectively, in the South, and to Liverpool, Manchester, Hull, Newcastle, and Glasgow in the north, will dispose of further argument on this question.

Captain Pearse says: "If goods are sold out here to merchants in these centres (i.e., the north and west of England) of course they should be sent direct to their ports, etc." The bulk of Australian and New Zealand primary produce (except wool) is not sold here, but on the contrary, is shipped to commission agents in London on consignment. Merchants in the North and Midlands who require such produce have to buy it second-hand, thereby incurring intermediate profits and commissions, plus heavy transport charges and risk of deterioration which inevitably causes restraint of trade.

Until produce is shipped direct, and distributed through such British ports and markets as can serve with minimum cost and handling, the consumers in their respective areas, it cannot properly be claimed that economical distribution is being effected.

Yours faithfully,

W. J. WADE,
Representative for the Port of
Manchester.
Sydney, 29/2/36.

CRUEL.

Customer: I don't like these pictures. They don't do me justice."

Photographer: "Justice? Lady, what you want is mercy."

MARKETING FRUIT IN SYDNEY.

Interstate Conference Convened by N.S.W. Chamber of Fruit and Vegetable Industries.

Meeting to be held at Sydney on April 16.

RECOGNISING SYDNEY as the principal market for fruit in Australia, the N.S.W. Chamber of Fruit and Vegetable Industries has convened an interstate conference of representatives of fruitgrowers' associations, the meeting to be held at the rooms of the Chamber, 216a Thomas Street, Haymarket, Sydney, on April 16, at 10.45 a.m. in the week following Easter.

In calling the conference, the chamber in its letter states that two remedies for the present unsatisfactory conditions have been suggested:

(1) Government control; (2) Survival of the fittest. The chamber does not agree with either, as, if the capable men on the growing and selling sides of the industry got together, effective distribution could be achieved, as has been done with wool, butter, canned and dried fruit. A representative body is therefore suggested linking the major fruitgrowing organisations with the chamber, grouped into sections according to particular needs, such section to elect its own officers and to have representation on the council of the chamber, and assisting to shape its policy.

It is pointed out that the proposed new section would in no way endeavour to supersede or run counter to the Fruitgrowers' Federation of N.S.W. The letter continues: "We believe the Federation has done and is doing splendid work for the growers The Federation does not concern itself with the marketing side of the industry, and it is on this phase . . . that the new section . . . could initiate reforms to the benefit of all . . . Organisations in the several States have expressed themselves in favor of the formation of this new section, which it is felt will fill a long-felt want."

Do not run any Financial Risk with your Fruit
but Consign it to

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Tasmania: State Fruit Advisory Board.
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Specialists in LARGE Consignments of QUALITY Fruits.

Our COOL CHAMBERS on the SELLING FLOOR of our WAREHOUSE are available for Consignors' Fruits THAT REQUIRE SPECIAL HANDLING. This service has been of great benefit especially with PEARS and over stocked markets.

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South and West Australia, Queensland:

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Australian Fruit and Produce Co.
6 City Markets, Sydney, N.S.W.

Market Notes and Prices

NEW SOUTH WALES.

Sydney (25/3/36). — The Market Representative of the Fruitgrowers' Federation of N.S.W. has forwarded the following market notes.

Business in the fruit market was particularly brisk on March 20 and 21, and, despite the wet Monday morning following, retailers purchased with a greater eagerness than might have been expected. This was probably due to the warm weather experienced and to the many visitors to sea-side resorts. The balance of this week, however, has been extremely quiet, with a resultant surplus of Grapes, which now comprise the chief summer fruit available.

Grapes from metropolitan sources give indications of the end of the season, and, although a few Black Muscat continue to arrive, White Sherry comprise the chief arrivals. Many showers during the last few weeks have affected the keeping quality of this fruit, and most sales are in the vicinity of 3/- to 4/-. Supplies of Grapes from the irrigation area now centre around the Cornichon variety. Waltham Cross and Gordo have finished, and unpayable prices were probably the cause of Doradillos ceasing to arrive. Deliveries of Cornichon have been heavy, but cool weather has prevented the best packs of this fruit receiving the attention which is customary. Grapes from the Young district appear to be practically finished, although a few choice Waltham Cross are still appearing. Molong is well advanced with its Black Muscat, and this variety is now arriving from Boremore, in the Orange district. Black Muscat from the inland districts have mostly arrived in a damp condition, and the same applies to Cornichon variety from Young and Orange. Weather conditions have been chiefly responsible for the moist state of the fruit, but the difficulty would be minimised by greater attention to the packing of the fruit, as frequently it appears that the lid has been jammed into position, causing some berries to be crushed and mould growth induced. The Grape market is very depressed at present, white varieties in particular having accumulated in the market.

Vendors of Pineapples are experiencing some trouble at the present time with waterblister. Upon arrival of the Queensland consignments sales of sound fruit are affected at 8/- to 10/-, but unless cleared immediately the following day witnesses considerable breakdown, due to this waterblister. As a result, some sales are being made as low as 3/- per tropical case, and continuous repacking is necessitated on the part of the agent.

Passionfruit has been scarce for some time, but this week witnessed an

increase of supplies from a number of sources; Victoria also forwarding a few cases. Choice quality fruit has been very scarce, and country order buyers and shippers have found difficulty in securing the quality usually required. As a result of the increased supplies that reached the market this week average sales are in the vicinity of 7/- to 10/-, while the few special

arriving are under offer at 12/- to 14/-. Small fruit, provided it is full of juice, is being taken by the factory buyers at from 3/6 to 5/- half bushel case. The quality of the Victorian fruit varied considerably, most sales being around 15/- to 18/- bushel.

A decided reduction in the quantity of oranges available has occurred during the last two days, Gosford and

Mangrove Mountain having previously forwarded heavily. Vendors are questioning whether this means the end of the season as far as coastal fruit is concerned or whether supplies are being diverted to the Brisbane market. Supplies of Vals. continue to arrive from the Irrigation Area and from the Orangeville (Camden) district, the latter fruit being of par-



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Pitts & Lehman, 129 Pitt St., Sydney,
N.S.W.; and A. J. Walshe & Co.,
Hobart, Tasmania.

ticularly good quality and of a size which is in request. Most irrigation area fruit is exceptionally large, and, therefore, is unpopular with the retailer and the public other than at 1/- dozen.

VICTORIA.

Market Report for March.

MARCH was a distinctly quiet month in the wholesale fruit markets. The slack period came a little earlier than usual, weather conditions being somewhat to blame, and were responsible for market fluctuations in both supply and demand.

Citrus: In these varieties the price for good quality Grapefruit kept up, and there was quite an offering of Californian Grapefruit and Navel Oranges. Very few Lemons were available. Generally citrus prices were good. N.S.W. Valencias coming in kept up supplies, otherwise there would have been a shortage.

Apples: Supplies were down. Good quality fruit brought satisfactory prices, but low quality stuff went very cheaply.

Peaches: A few late Clingstones were all that remained of the season; fair prices were reported.

Pears started up normal at the beginning of the month, but prices dropped tragically towards the end. Williams held at first, but all lines were being dumped at the end of the month.

Pines: Supplies were good right through, and prices normal.

Grapes: Supplies were only medium, and fluctuated throughout the month. The keeping qualities were generally very poor, but this improved in the latter half.

Tomatoes: Owing to scarce supplies there were at least two high-price periods, with fluctuations in between. Firming towards the last week, the tendency is to hold good prices, subject to weather conditions remaining mild.

Bananas: Over supply caused low prices, which were pretty general throughout.

Peas and Beans: Good prices ruled through the whole month, but were changing rapidly; 12/- to 22/- was reported on one day, with frequent lesser differences during the month.

VICTORIA.

Melbourne (30/3/36).—Quotations are at a bushel case, except where otherwise stated: — Apples—Eating 3/- to 6/-, few higher, cooking 2/6 to 4/6, few higher. Grapes 3/- to 9/-, few specials to 10/-. Oranges—Vals., average standards, 5/- to 10/-, few to 11/-, according to counts; selected standards to 12/- and 13/-; specially selected to 14/- and 15/-, few to 16/-, best counts. Lemons—Average standards, 6/- to 9/-, a few to 10/-; good standards to 12/- and 13/-; few specials to 15/-, green and part colored lower. Grapefruit, good standards, 10/- to 14/-, few specials to 15/- and 16/-. Pears—Dessert 3/- to 5/-, few specials higher; culinary, 2/- to 4/-. Plums, 4/6 to 7/6. Quinces, 2/- to 4/-. Bananas, Q'land (green), 6's 11/- to 12/-, 7's 12/- to 14/-, 8's and 9's 14/- to 16/- double case; few specials higher. Pineapples, Q'land., 7/- to 9/- double case; few special higher. Passionfruit, 6/- to 12/-, few special higher. Tomatoes, 1/6 to 6/-, few special to 7/- and higher. Cantaloupes, 4/- to 8/-.

The Melbourne market manager of the Federal Citrus Fruits Council reports sales as follow:—Vals., average

standards 5/- to 10/-, a few 11/-; selected standards, 7/- to 14/-; specially selected, 15/- to 16/-, a few higher; a few late Mildura, 18/- and higher, best counts. Grapefruit, a few to 15/- and 16/-, best counts. Lemons, average standards, to 8/- and 9/-, a few 10/-; good standards to 11/-, a few 12/- and 13/-, part colored lower; a few specials to 14/- and 15/-.

SOUTH AUSTRALIA.

Adelaide (27/3/36).—Apples (eating) 3/6 to 4/6 case, do. (cooking) 2/6 to 3/6; Apricots 10/-, Figs 7/-, Grapes (dark) 8/-, do. (white) 7/-, Lemons 8/- to 9/-, Oranges (Common) 14/-, do. (Navel) 14/- to 16/-, do. (Poorman) 4/-; Passionfruit 20/-, Peaches 10/-, Pears (eating) 7/- to 8/-, do. (cooking) 4/-, Pineapples 14/-, Plums (light) 4/-, do. (dark) 5/-, do. (Damson) 6/-, do. (Jap.) 6/-, do. (Prunes) 5/-, Pomegranates 4/- case, Quinces 3/- case.

WESTERN AUSTRALIA.

Perth (25/3/36).—Apples: Jon. flats 2/- to 4/6, dumps 2/- to 7/- (special to 9/-), Dunns, flats 1/6 to 3/6, dumps 2/- to 4/-, G. Smith flats 3/- to 5/-, Cleo flats 1/9 to 3/6, dumps 2/6 to 5/-. Citrus: Val. Oranges, flats 2/- to 6/6, dumps 9/- to 12/-, Lemons 4/- to 14/-. Plums: President, flats 4/- to 10/-, other varieties 4/- to 7/-. Peaches 3/- to 8/6, Nectarines 6/- to 12/6. Pears: Bartlett, flats 4/- to 8/-, other varieties, flats 1/6 to 5/-; Grapes, open, white, Muscatel, 3/- to 6/6, closed 1/- to 4/-, colored, Wortley Hall 3/- to 7/-, Red Prince 3/- to 4/6; Passionfruit 3/- to 10/6, Tomatoes 1/- to 7/6, Bananas 18/- to 29/- crate.

QUEENSLAND.

Brisbane (21/3/36).—Messrs. Clark & Jesser report as follows:—During the past month supplies of most fruit, with the exception of Apples, have been heavy. At the present time there are heavy supplies of cool-stored William Pears on the market, and as these Pears all have a tendency to discolor when they ripen they are therefore very unpopular at this time of the year with the buyers. Growers would be well advised to market their William Pears on the Brisbane market in February. As an instance of this, for the most part of February and the first week in March, they were worth 9/- to 11/-, and at the present time there are large quantities on the market selling at very low rates, and some quite unsaleable.

The ruling prices at present are:— Apples: Jon. and Del. 8/- to 9/-, other colored varieties 7/- to 8/-, G. Smiths 7/- to 7/6. Pears are very plentiful, and low prices ruling: W.B.C. 5/- to 7/-, Gansell's 5/- to 8/-, Caps. 4/- to 5/-. Oranges: Best quality 9/- to 10/-. Plums: Presidents and Grand Duke's 4/- to 6/-. Grapes: Muscats 8/-, G.C. 4/- to 5/-, Waltham Cross and Purple Cornichon 7/- to 8/-. Tomatoes 2/- to 5/-. Pines, rough 9/- to 10/- case, smooths 4/- to 5/-. Beans, 2/- to 4/- sugar bag. Peas, 9/- to 10/- sugar bag. Pumpkins, 4/- cwt. Cabbage, 4/- to 5/- doz. Beetroot and Carrots, 9d. to 1/- per doz. bunches.

The weather for the past fortnight has been wet, with serious flooding in most parts of the country. This has had a very depressing effect on the market.

Brisbane. — Messrs. Robsons Pty. Ltd. report under date March 19 as follows:—Market values in Brisbane

Highest Prices.

A. S. BARR

Prompt Returns.

FRUIT EXCHANGE, BRISBANE, QUEENSLAND.

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Lemons, Grapes to
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this market will have
careful attention and
realise highest prices
if sent to

The Co-operative
Fruitgrowers of Otago
Limited, Dunedin

PERSONAL SUPERVISION
OF
EVERY CONSIGNMENT.

Cheques posted promptly.

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"Peachbloom," Dunedin.

have been very unsettled during the past week.

A feature of this unsettled condition is that heavy rain has been experienced in North Queensland, causing floods in various districts, and, in view of this, special fruit trains, which load large quantities from Brisbane for northern districts have been cancelled.

Supplies of local Apples are much easier, the bulk of consignments coming to hand comprising G. Smiths, which are selling to 8/6, other varieties are Dunns to 5/-. Del. to 8/6, eating to 9/-.

Choice Jons. from Kentucky and Victoria are realising to 10/-.

Southern Pears are selling as follows:—N.S.W. Williams to 10/-, Vic. Gansells to 8/-, Caps to 7/-, Howells to 6/-, and Kentucky Winter Coles to 11/-.

Rates for choice Lemons are to 17/-, and Oranges to 11/6.

Plums: Ponds, Grand Dukes and Presidents to 8/-.

Papaws to 16/- tropical case, and Custard Apples to 7/- half bushel.

The various varieties of Grapes are selling as follows:—Muscats to 5/-, Waltham Cross to 7/-, Gros Coleman 2/6, and the ordinary white variety 4/6.

Pineapples, smooth leaf to 7/- case, and roughs to 9/-.

Bananas, sixes to 7/6, sevens 8/6, and eights 9/6.

NEW ZEALAND.

Dunedin (20/3/36). — Messrs. Reilly's Central Produce Mart Ltd. report as follows:—Large supplies of Apples are now arriving, varieties being mostly Del. and Jons., Cox's being in rather short supply, and for good quality Cox's there is a slightly better enquiry. Other lines are still selling at low values.

Nectarines, Plums and Peaches are in fair supply. Passion Fruit is now coming to hand from the north. Good dessert Pears are realising satisfactory values.

Vegetables, with the exception of Cauliflowers, are in fair supply, and prices are reasonable. Outdoor cucumbers are plentiful and cheap. Canterbury Onions have a good inquiry, and prices show a slight advance. Large consignments of Tomatoes are coming to hand, and prices remain satisfactory. Hothouse Grapes have a better inquiry. The local quota of Niue and Samoan Bananas ex the "Maui Pomare" arrived during the week in prime green condition.

Prices: — Cal. Lemons 48/-, N.Z. Lemons 10/- to 14/-, ripe Bananas 19/-, Cal. Grapefruit 35/-, Cal. Navel 35/-, Raspberries 3/6 to 5/-. Apples — Gravensteins 5/- to 6/-, Cox's Orange 4/6 to 8/6, Jonathans and Delicious 4/- to 6/-, cooking 4/- to 5/6. Pears—Beurre Bosc and Conference 4/- to 5/-, cooking Pears 3/6 to 4/-, Quinces 6/- to 7/6.

FIRMS IN THE FRUIT TRADE

TIM YOUNG & CO. PTY. LTD.

(No. 8 of Series.)

MR. WM. S. FONG, who is managing director of Tim Young & Co. Pty. Ltd., of the Wholesale Fruit Markets, Melbourne, has been associated with the fruit trade for very many years, and he has been largely instrumental in the building up of the above firm to its present flourishing state.

Some years ago, when the original Mr. Tim Young passed away, Mr. Fong took over the directorship of the company, and under his guidance the business has materially expanded in many directions.

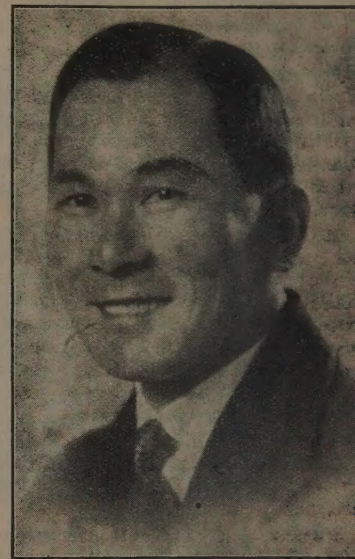
Being one of the largest handlers of citrus fruits in this city, and handling some of the best brands, exclusively from South Australia and Murray River districts, Mr. Fong devotes much of his time amongst the growers concerned, as he believes in personal contact with his many clients.

When the change over from the Old Western Market site was mooted a few years back, Mr. Fong was far-seeing enough to secure a large store adjacent to the present Wholesale Markets, and thus securing adequate storage space for the large volume of fruit and Bananas which are entrusted to the firm for handling. In these larger premises are equipped up-to-date ripening chambers, fruit packing floors and the bulk store, so necessary when large stocks of fruit and cases are handled.

The firm of Tim Young & Co. Pty. Ltd. is linked up with practically all the important growers' organisations in the Commonwealth which market their fruit and Tomatoes in this city, and every effort as far as is humanly possible is made to satisfy all concerned.

Mr. Fong is a well-known identity in the fruit trade, and with his long experience with both buyers and growers has a thorough grip of the markets, and personally sees to the many activities of the firm.

In recalling the good old days, when life and business were simpler, Mr. Fong believes that marketing was more settled and prices could be



MR. Wm. S. FONG,
Managing Director of Tim Young & Co. Pty. Ltd.

better forecast, were more uniform and probably more satisfactory by reason of the general transport being by rail, and supplies more easily recorded. Even now the activities of the Wholesale Fruit Merchants' Association are valuable to the industry and confers advantages to growers and retailers alike. His firm is a member of that organisation.

Reminiscences of earlier days also recalls that a great change has taken place in the methods of grading and packing fruit, and the changes have been to the benefit of the industry. In one case only, as an example, the Victorian Central Citrus Association has definitely made a contribution by causing improvements in both grading and packing citrus fruits, until approximately 95 per cent. of citrus growers meet the high standard of quality and packing required.

Mr. Fong anticipates that, by co-operation between growers, wholesalers and retailers, the wholesale fruit marketing business will make an even greater demand in the form of service, and his firm is well equipped and staffed to meet the new and changing conditions that are continually marking the progress of the business.

AUSTRALASIAN FRUIT IN U.K.

Victorian Pears ex "Mongolia" were in good condition, but met a market dominated by South African Pears, and some realised only around 8/6 per case.

New Zealand first arrivals found a good market, Alfriston realising 13/- to 14/- per case, Worcesters 10/- to 12/-, Gravenstein 9/- to 10/-; both latter immature.

The first shipments of Australian Apples by the "Moldavia" arrived in excellent quality and condition. Jonathans realised 11/- to 13/-.

AMERICAN FRUIT IN HOLLAND

Continental Prices.

Rotterdam, 19/2/36. — American Pears, ex f. Anjous, 11/3 to 13/- Winesap Apples, ex f., 10/- to 11/3 Jons., ex f., 10/7 to 11/-, fancy, 8/6 to 10/3.

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IN REFRIGERATOR or COOL, WELL VENTILATED 'TWEEN DECK specially adapted for Fruit Carriage and fitted with powerful Electric Fans.

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Sail every Saturday for Townsville and Cairns.

CARGO VESSELS sail Weekly for Sydney and Brisbane (Tuesdays).

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SPECIAL NOTICE TO FRUITGROWERS

In response to numerous requests from growers for information as to who are members of the

Wholesale Fruit Merchants' Association of Victoria

the following list is given. All are members of the above Association, and are registered firms carrying on business in the

WHOLESALE FRUIT MARKET, MELBOURNE.

STAND NUMBERS ARE AS INDICATED IN PARENTHESES.

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Correspondence is invited by the Association.

Office: 21 Wholesale Fruit Market,
Queen Street, Melbourne. Phone F 4866.

The Home Circle

THIS CHANGING WORLD

ON EVERY SIDE there are discussions as to the new outlook for humanity.

We hear of Douglas Credit, Social Credit, Socialism, Communism, an Economic League of Nations, the New Christian Social Order—all having the objective of providing greater freedom and opportunities for self expression for the dwellers on this planet.

Is there a general focal point?

One thing is outstanding, viz.: That science has answered the question of production.

The whole world can now produce primary and secondary commodities with a facility that was not dreamed of even twenty years ago.

Apparently the distribution of this world's goods is the trouble, and it should not be beyond the powers of our united intelligence to devise a system by which the goods which are now so readily produced should be better distributed.

On the face of it the machine is steadily displacing human labor, and thus progressively more and more must go out of employment.

Is the machine to be our master or our servant?

Are we to have shorter working hours for higher pay?

In a world which is now producing so freely all our material needs, why should there not be distributed sufficient for all? And in lifting the economic burden, there will be more time for art, culture and spiritual understanding.

It is a tragedy to see so many of the rising generation out of employment. They are the men and women of to-morrow, many have never worked at all. Not because they do not want to, but because there is no opportunity.

Stanley Jones, a writer of world fame has written a challenging series of books: "The Christ of the Indian Road," "The Christ of the Round Table," and others, but his latest book has set the world thinking. It is entitled "Christ and Communism." All should read it, whether they agree with it or not.

Stanley Jones, with a life time's experience in India, and with an understanding of both Eastern and Western psychology went to Russia and he presents the picture of 170,000,000 people, none of whom is out of work, steadily developing both materially and socially. He notes the good points of the Marxian doctrine, but challenges its excesses. He points out the weaknesses under the capitalist regime in other countries, and the

superstitions which have cluttered the Christian religion.

Communism, says Stanley Jones, is a challenge to the world, and we have to face it whether we like it or not. The present generation will give its answer.

That answer will be given within 25 years, probably less.

Above all, this deeply spiritual thinker and leader states that the truths embodied in the Sermon on the Mount are still unchallenged and unchallengeable. But the gospel of the salvation of the individual for some future experience has been stressed to the extent of missing the social gospel of goodwill for this present workaday world.

We are all thinking in world terms to-day. We have to.

It is for the man on the land, in the midst of co-operating with the forces of Nature, to ponder on these subjects and to provide the leadership which will usher in a better day for the benefit of the present and the rising generation.

Meditation: I live in the Kingdom of Heaven to-day!

The Kingdom of Heaven is not a place: it is a state of mind. It is the realisation that whatever the truth of life is, must be true now, here, for me. Though the whole universe be full of good, it can mean nothing to me except as I realise it for myself, and think it, accept it, and experience it as a part of my own consciousness.

That state of mind in which I am aware of peace, harmony, and love; and in which I refuse to recognise, validate, or express worry, discord or hatred, is heaven for me.

Whatever takes place in my world to-day shall provide me with the opportunity to prove that my consciousness of the truth is greater than any condition. By being kind, I shall attract kindness and courtesy. By maintaining poise and serenity of soul, I shall inspire others to do likewise.

Irritating incidents are temporary, fleeting: the principle upon which my strength and poise are based is eternal. To-day I accept the reality of the Inner Kingdom of peace, poise, and joy. I am strong with the strength of the Spirit. Love rules the world. I rest in the calm assurance that my Father is within me, the fountain of Life; the source of wisdom and happiness; the Divine Intelligence that helps me to find my way and live my life in peace and harmony to-day.

RECIPES.

Apple Jelly.

Cut up Apples roughly into preserving pan, cover with water and cook till the fruit is a pulp. Strain through a jelly bag all night and next day add 1 cup of sugar to 1 cup liquid. Boil till it jellies—about 3 hour.

Apple and Ginger Marmalade.

6 lbs. cooking Apples, 3 lbs. preserving sugar, 1 Lemon, 4 ozs. ginger, 2 tablespoons ginger syrup. Peel and core Apples, and cut into small pieces. Put into pan with grated rind and juice of Lemon, sugar and syrup. Add the ginger cut into small pieces when nearly done.

Blackberry Jelly.

Cook Blackberries with a little water till soft. Strain through a jelly bag, and to each cup of liquid add 1 cup sugar. Cook till it jellies when tested—about 3 hour.

A SONG IN MY HEART.

There's a song in my heart to-day,
A song so true and deep,
Maybe an angel left it there,
In the first sweet flush of sleep.

I sing that the age-long dream
Of peace, the heart holds dear,
Is God-implanted, God-inspired
And the time is drawing near.

O slumbering hearts awake,
And with the angels sing
Of the new day dawning on the earth
When Love alone is King.

Kate Thomson.

THE WITNESS.

Old lady, the only witness of a car smash: "They was neither of 'em to blame; they was both looking the wrong way."

Beekkeeping Notes

INTRODUCING QUEENS.

Some Advice to Beginners.

Many queens are lost when introducing, not only amongst beginners, but also experienced beekeepers sometimes have bitter feelings over the loss of valuable queens. This is on account of the variable conditions and different methods of introducing. When conditions are good, that is, when there is plenty of pollen and honey being gathered, the weather is fine and the bees are happy, the instructions sent on the address card are usually sufficient, and if carried out carefully, the method is generally successful.

The best time to give a queen to a colony is when it has been queenless for from 24 to 48 hours. If queen cells are started it is better to wait until all the brood is capped, and then destroy all the queen cells before introducing. If conditions are not really good it is safer to remove the escort bees from the cage and introduce the queen alone, or an easier and more satisfactory way is to remove the queen and place her in an introducing cage with the hole plugged with candy, and introduce with this cage. The bees will feed the queen through the gauze until released by the candy being eaten out.

Then there is the water method, which is quick, and has been very successful. Where a lot of queens have to be introduced, we think it is the best.

Mr. L. E. Snellgrove, a beekeeper in England, is given credit for introducing this novel and useful method.

Place the queen in an empty match-box, and opening it slightly, pour in slightly warmed water until full. Shake the box gently to and fro, and pour the water out, and allow the queen to walk down among the bees.

HONEY FOR GOLFERS.

Golf ball manufacturers, after extensive experiments to find the best permanently elastic centre for golf balls, have decided that honey is a more satisfactory filling than either glucose, castor oil, water-glue or several other substances tried out. The honey, however, must have low dextrose content to prevent granulation and consequent shrinkage and loss of elasticity. It is wondered if this will precipitate a rush by Scotch golfers to grow their own honey.

AUTUMN EXTRACTING.

To Guard Against Shortage of Winter Stores.

Where Stringybark and Gum Trees are flowering it is anticipated that a further extraction or two of honey will be obtained, and, in addition, the flora mentioned should provide a good supply of winter stores. The honey from these species is of second-grade quality, but for the wintering of bees it cannot be bettered, writes the Senior Apiary Instructor of the New South Wales Department of Agriculture in current notes.

Getting on towards the close of the busy season, say, in early April, there is always some anxiety, particularly in the cooler climates, as to whether, if extracting work is proceeded with, the honey flow might cease because of adverse weather conditions, thus leaving the colonies short of stores for wintering. A good way to ensure against being caught in this manner is to extract only half of the hives in the apiary at one time, and then when good progress has been made in honey storage in the extracted hives, the remaining full ones may be dealt with.

If worked in this way there are always ample stores available, if required, for wintering purposes. Many of the younger beekeepers are afraid to risk removing any honey from the hives during March, and this may lead to congestion in the brood nest, which is usually detrimental to the bees.

WINTER CARE OF BEES.

Comfortable Colonies Come Through in Better Heart.

The mildness of our winter makes for too careless handling of the colonies during this season of the year, points out the Senior Apiary Instructor of the N.S.W. Department of Agriculture in current notes. In such prominent beekeeping countries as the United States and Canada, where winter temperatures are for a good part of the time well below zero, bees have to be packed in specially insulated packing cases or in cellars. In fact, in a few areas in Canada, the conditions are so severe that there is little chance of bees pulling through, and beekeepers destroy the colonies in the autumn, store the hives and combs, and stock them up again in the following spring with 1 lb. or 2 lb. packages of bees purchased from the warmer southern parts of the U.S.A.

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To the Manager,
The "Fruit World"—

Sir—Enclosed please find remittance for a year's subscription to the "Fruit World & Market Grower," commencing with the next issue.

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8-10 Orr St., off 78 Victoria St.,
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N.S.W. OFFICE:
439 Kent Street,
Sydney.

BEEKEEPING—

(Continued from page 35.)

The trouble in Australia, with its mild climate, is that most beekeepers, apart from the precaution of having ample stores available in the hive, go to no further trouble, and very often get through with it. But even though we can winter the colonies out of doors without special packing cases or cellars, some care in making the hive a comfortable home is necessary. There are too many supers left on the hives, and some of the hive bodies are made of timber which is too thin to give protection, and colonies are not comfortable during the cold weather. In some seasons it would not matter if the bees were left on skyscraper hives, but there are other times when much depends on whether the comfort of the bees has been considered. In such seasons the properly-cared-for colonies come through to spring in better heart, and with greater vitality, and they are prepared for a honey flow much earlier than those not carefully attended.

TALK TO THEM.

It is said that France provides something rather unusual in the way of bee-keeping. The county of Basque, set amongst the mountains of the Western Pyrenees, is a land of strange customs and legends. One of such is the custom of talking to the bees.

The peasant women at night stand before the hives and speak in low tones. They believe that the bees want to know the happenings in the house during the day, and if they are not kept informed, they will fly away and swarm elsewhere, hence the curious custom.

It is suggested that it would not be safe to advise the bees of all that the Australian beekeeper has done each day, or the domesticated hives would all "go native."

The Pig Pen

Pigs and Fruit.

A West Australian exchange reports upon the value to orchardists of running pigs in connection with fruit. Blackwood district is already well known for the quality of the Apples it produces, and the exchange deals with the increasing tendency of the Blackwood farmers to develop pig raising as a lucrative branch of their agricultural efforts. The recent increase in the pig population of Blackwood has been very marked during recent months, and it would seem that the future of this industry is very promising. It goes on to say: Many farmers in the Blackwood district are commencing to feel that the locality is well placed for development in this regard. In the Blackwood district, heretofore, there have been two main avenues of endeavour.

The first is dairying, and the second Apple growing. To those two industries should now be added sheep. I venture to predict that in the next few months, or years, will be added a fourth, and the fourth will be pigs. Pig breeders in the Blackwood district have great advantages, the value of which are only just commencing to be fully understood by some of the farmers. In the dairying season they have the skim-milk as an adjunct to other feed, and in the fruit season there are all the windfalls, and rejects, which in the past have been a source of trouble, but which in the future will be turned into hard cash.

I know there is some difference of opinion, as to the quantity of Apples which can be fed to pigs with advantage. It has been said that over 6

lbs. of Apples a day fed to weaners are not good, owing to the acid contents of the Apple, but any difficulty of this kind can be neutralised by the use of a little pollard, or, better still, whole grain. Another food for pigs that can be grown to great advantage is Peas. These are good for the ground, and the pigs too. At present prices the advantage of a few pigs as a remunerative sideline on every farm cannot, or should not, be ignored.

SOW'S MILK CAPACITY.

A bad milking sow is worse than no sow at all, because she loses money instead of gaining it. It has recently been shown that by drawing milk from one or more teats, when the young pigs are feeding from their dam, the approximate yield can be ascertained, but a good deal of patience and experience is needed to succeed in this procedure. The pigs feed several times daily, and the milk is not let down until they do feed. The milk, too, falls off in quantity from week to week after the fourth week, until in the eighth week or slightly before weaning the quantity produced is not

much more than one-half the yield of the fourth week. A sow may produce up to 11½ lbs. in a day during the fourth week, and as little as 3½ lbs., and, therefore, it is not difficult to see how impossible it is to expect well-grown youngsters where the dam is an inferior milker.

REMOVING LICE FROM PIGS.

Here are two methods of removing lice from pigs, given in "Pig Progress," the monthly news bulletin of the Pigs Marketing Board, Northern Ireland:—

1. A simple and effective method of ridding pigs of lice is by the use of used motor oil taken from the "sump" of a car or lorry, with a small quantity of paraffin oil added.

The paraffin removes the lice, while the motor oil prevents irritation.

Place the mixture in an ordinary oil can and apply a little at intervals along the neck and back of the pig; the oil will then spread itself over the pig's body.

2. Another simple and effective method of ridding pigs of lice is to

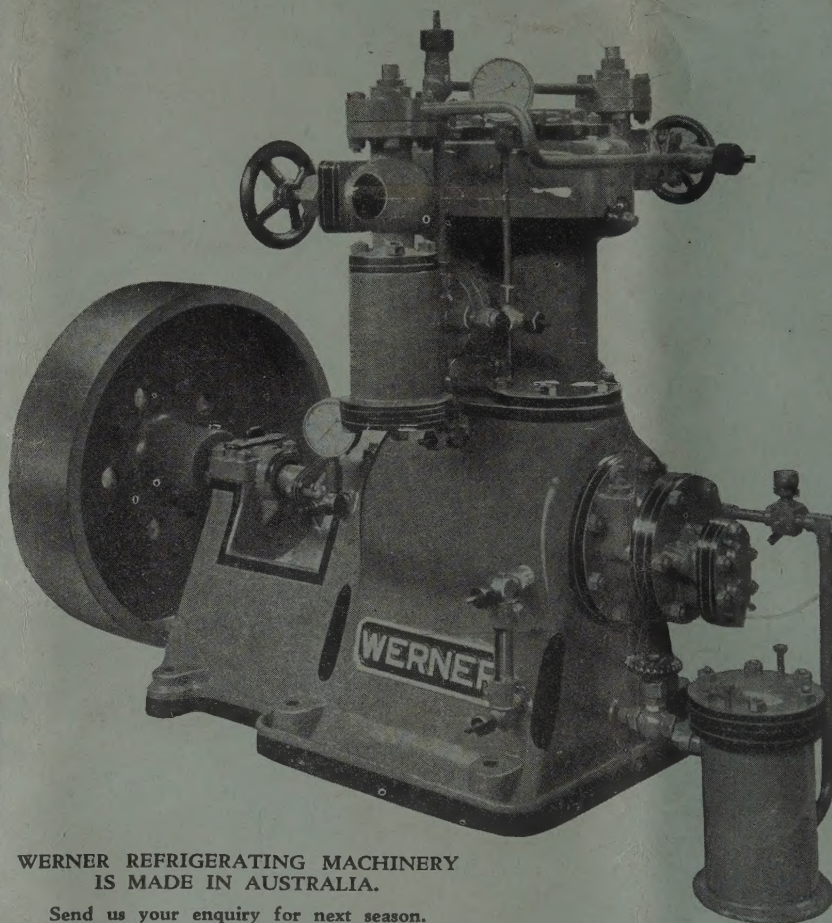
dust a small amount of tobacco powder (which can be purchased at any chemist's) along the back of the pig and behind the ears.

ULCERATION OF THE SKIN.

Ulceration has been described by Queensland departmental veterinary officers as ulcerative spirochaetosis of pigs and ulcerative granuloma of pigs. Mr. K. S. McIntosh, B.V.Sc., states that, as the name denotes, the disease is caused by a spiral-shaped germ, which apparently gains entrance to the body through wounds or scratches of the skin or deeper structures. It is not uncommon to find the sockets of the teeth affected when the milk teeth are being shed, and it is frequently seen causing large abscesses following castration. Other organisms are also present, but are regarded as secondary invaders, and not the primary cause. The disease is generally, though not always, associated with dirty, unhygienic and badly managed piggeries, and no doubt is encouraged by lice and other parasites.

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